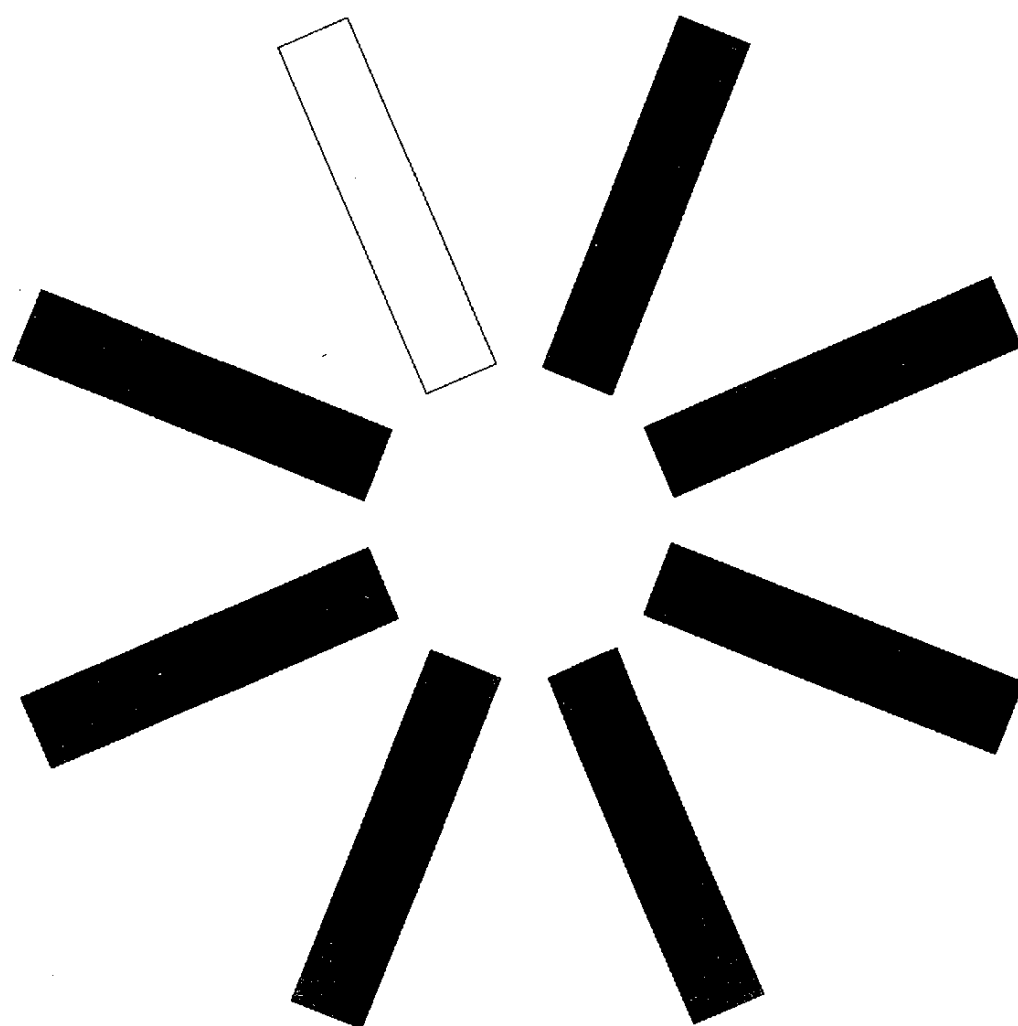


# **Databases in Japan**

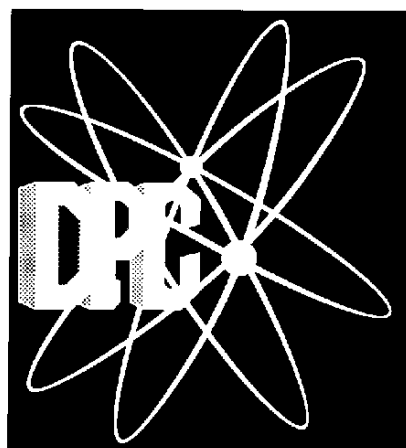
## **1995**



Database Promotion Center, Japan (DPC) was established in 1984 with the information suppliers, users and related industrial circles approved by the government. DPC is a non-profit organization aimed at the promotion, research, production and dissemination of database services worldwide.

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# **Databases in Japan 1995**



Database Promotion Center, Japan



## CONTENTS

### **I The Course of Databases over the Past 10 Years and the Outlook for the Future**

1. Course over the Past 10 Years .....	1
1.1 Sales Double.....	1
1.2 Five-Fold Increase in Number of Domestic Databases.....	2
1.3 General Category Demonstrates Rapid Increase.....	2
1.4 Steady Increase in Databases Supplied Overseas .....	4
1.5 Three-Fold Increase in Participating Organizations .....	4
1.6 Users Increase 10-Fold.....	5
2. Future Outlook .....	6

### **II Trends of the Database Service Market**

1. Trends of Database Sales .....	9
2. State of Database Distribution .....	11
2.1 No. of Databases Approaching the 3,000 Level .....	11
2.2 Distribution State by Category .....	13
3. Comparison of Database Conditions in the United States and Japan .....	16
3.1 Comparison of Database Industry Strength .....	16
3.2 Comparison of the States of Database Distribution .....	17

### **III Trends in the Database Service Industry**

1. Positioning of Database Services .....	19
2. The Sales of Database Service .....	19
2.1 Ratio of Database Sales to Company Gross Sales .....	20
2.2 Ratio of Japanese Database Sales to Total Sales .....	20
2.3 Sales Ratio by Supply Method .....	21
2.4 Growth Rate of Database Sales .....	21

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2.5	Expected Growth Rate of Future Database Sales (Corporate Level) .....	22
2.6	Expected Growth Rate of Future Database Sales (Industry Level) .....	22
3.	Media Holding the Highest Expectations .....	23
3.1	Media Holding the Highest Expectations .....	23
3.2	Predicted Growth Rates .....	24
3.3	Service Images Holding the Highest Expectations .....	24
4.	Distribution of Databases .....	25
5.	Problems in Database Construction .....	25
6.	Utilization of Public Data .....	26
7.	Types of Data (Text, Image, Visual, etc.) .....	28
7.1	Data Currently Being Supplied (or Scheduled to be Supplied) .....	28
7.2	Positioning of Image and Video Data .....	30
8.	Database Supply by CD-ROM .....	31
8.1	Whether or Not CD-ROM Databases Are Being Supplied .....	31
8.2	Categories of CD-ROM Databases .....	31
9.	Internet Utilization .....	33
9.1	Whether or Not Internet is Used and the Reasons .....	33
9.2	Concerns/Problems with Using Internet .....	34
10.	Present State of Overseas Database Supply .....	36

#### **IV Use of Commercial Databases**

1.	Summary .....	39
2.	Usage Results and Forecasts .....	39
3.	The Types and Contents of Most-Used Commercial Databases .....	41
3.1	Most-Used Database Vendors and Database Files .....	41
3.2	Categories of Frequently Used Databases .....	45
3.3	Types of Data Used .....	45
3.4	Utilization of Public Data .....	46
4.	On-line/Off-line Utilization .....	47
5.	Issues on Pricing and Utilization .....	48

5.1	Pricing Issues .....	48
5.2	Dissatisfaction with Recorded Information .....	48
5.3	Problems with Commands, Functions and Operability .....	49
6.	Increased Database Utilization by PC Network Services .....	49
7.	Utilization of Internet .....	50
8.	Questions Relating to CD-ROM .....	52
8.1	Utilization of Information on CD-ROM .....	52
8.2	Categories of Information Use .....	52
8.3	Currently Used CD-ROM Software .....	53

## **V State of Personal and Home Utilization**

1.	Introduction .....	55
2.	Summary of Survey Results .....	55
3.	Database Utilization by PC Network Services .....	56
3.1	Increase in Use at the Personal Level .....	56
3.2	Home Use Surpasses 60% for the Place of Use .....	56
3.3	Fees Borne by User Even at Work .....	56
4.	Trends of Personal Utilization .....	57
4.1	High Expectations Placed on CD-ROM .....	57
4.2	Articles, Corporate and Book Information Comprise Top Three .....	58
4.3	High Demand for Shopping and Leisure Information .....	59
4.4	Fee System Generates the Greatest Dissatisfaction .....	60
5.	State of Utilization of Internet .....	61

## **VI Informatization of Japan and the Role of the Administration**

1.	Promotion of an Advanced Information and Telecommunications Society .....	63
2.	Expectations on the Administration for Informatization .....	63
3.	Administrative Informatization .....	64
4.	Far-Reaching Effects of Realization of a Computerized Society .....	65

## LIST OF FIGURES

Figure	Page
I-1 Changes in Domestic Databases by Category .....	3
II-1 Growth in Annual Sales of the Database Service Industry .....	10
II-2 Changes in the Number of Databases Accessible in Japan over the Past 10 Years .....	11
II-3 Changes in Database-Related Growth over the Past 10 Years (1984 = 100) .....	12
II-4 Graphical Comparison of Database Circumstances in the U.S. and Japan (1993) .....	18
III-1 Positioning of Database Services .....	19
III-2 Distribution of the Ratio of Database Sales to Company Gross Sales .....	20
III-3 Ratio of Database Sales by Supply Method .....	21
III-4 Distribution of Year-on-Year Changes in Database Sales .....	21
III-5 Distribution of Expected Annual Average Growth Rate of Database Sales over Five Years (Company Level) .....	22
III-6 Distribution of Expected Annual Average Growth Rate of Database Sales over Five Years (Industry Level) .....	22
III-7 Media Expected to Demonstrate the Highest Growth over the Next Five Years (N=119, multiple replies) .....	23
III-8 Annual Average Growth Rates of Media Expected to Grow over the Next Five Years (Forecast) .....	24
III-9 Problems in Database Construction (N=84, multiple replies) .....	26
III-10 Reasons for Using Public Data (N=32, multiple replies) .....	27
III-11 Currently Used Public Data (N=33, multiple replies) .....	27
III-12 Types of Data Currently Supplied Online (N=72, multiple replies) .....	28
III-13 Types of Data Currently Being Supplied Off-line (N=72, multiple replies) .....	29
III-14 Types of Data Desired to be Supplied On-line (or to be Increased) in the Future (N=59, multiple replies) .....	29
III-15 Types of Off-line Data for Which There Is Future Demand (or for Which an Increase in Supply Is Sought) (N=44, multiple replies) .....	30
III-16 Whether or Not CD-ROM Databases Are Being Supplied .....	31
III-17 Status of Providing Database Services via Internet (N=103) .....	33
III-18 Reasons for Providing or Planning to Provide Database Services via Internet (N=72, multiple replies) .....	34
III-19 Nature of Concerns and Problems Relating to Internet Use (N=18, multiple replies) .....	34



III-20	Growth in Databases Supplied Overseas .....	36
IV-1	Categories of Frequently Used Databases (multiple replies) .....	45
V-1	Categories of Frequency Used Databases (Total no. of Replies: 2,425) .....	58
V-2	Categories Desired to be Used (Total no. of Replies: 6,229) .....	60

## LIST OF TABLES

Table		Page
I-1	The Course of Databases over the Past 10 Years .....	1
I-2	Number of Passwords by Vendor .....	5
II-1	Annual Sales by Various Information Service Sectors .....	9
II-2	Distribution by Category of Databases Accessible in Japan (Number of Databases) .....	14
II-3	Comparison between Japanese and United States Databases (1993) .....	17
III-1	Supply Status of CD-ROM Databases (No. of Companies) .....	32
III-2	Number of Domestic Databases Being Supplied Overseas (Actual Numbers).....	36
IV-1	Annual Average Cost for Databases by Company Size .....	40
IV-2	Highly Utilized Vendors, According to the Number of Replies (N=472, multiple replies) (Aggregate of top five vendors used by each respondent) ..	41
IV-3	Databases with High Utilization Frequency (N=457, multiple replies) .....	42
IV-4	Ranking of On-line Information Service Companies (Vendors) by No. of Contracted Users .....	43
IV-5	Types of Data Currently Being Used or for Which a Future Increase in Usage is Desired (multiple replies) .....	46
IV-6	Utilization of Databases Handling Public Data.....	47
IV-7	On-line/Off-line Utilization Rates (N=404) .....	48
IV-8	Frequency-Used PC Network Service Menus (multiple replies) .....	50
IV-9	Purposes of Using Internet .....	51
IV-10	Merits of Internet .....	51
IV-11	Problems Concerning Internet Utilization .....	52
IV-12	Currently Used CD-ROM Software (N=113, multiple replies) .....	53
V-1	Frequently Used Databases (multiple replies).....	59

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## Appendix

Table 1	Japanese Databases Accessible Overseas (1995:Producers) .....	67
Table 2	Japanese Databases Accessible Overseas (1995:Distributors/Agents).....	78
Table 3	Japanese Database being Planned for Overseas (1995).....	96
Table 4	Address of Overseas Service Points (1995:Producers/Distributors) .....	97

## I The Course of Databases over the Past 10 Years and the Outlook for the Future

### 1. Course over the Past 10 Years

#### 1.1 Sales Double

This section looks at the course databases have taken in Japan over the past 10 years (Table I-1).

Sales of database services roughly doubled over the past 10 years, increasing from ¥96.7 billion in 1984 to ¥211.5 billion in 1993. The average annual growth rate during that period was nearly 9%. Due to the current economic recession, negative growth has been recorded for the past two consecutive years. With the exception of the past two years, however, sales have grown at the rate of better than 12% on average.

Although it is difficult to say definitely since the concept of industry-type classification in the Survey of Selected Service Industries was changed along the way, at one time sales demonstrated

**Table I-1 The Course of Databases over the Past 10 Years**

	1993	1984
Sales (billion yen)	211.5	96.7
No. of Commercial Databases (Imports and Domestic)	2,980	924
Total No. of Domestic Databases	1,007	199
General	404	35
Natural science and technology	129	43
Humanities	41	2
Business	422	108
Others	11	11
No. of Databases Supplied Overseas *1)	353	28
No. of Vendors	203	75
No. of Producers	126	55
No. of Passwords *2)	317,773	32,071
U.S./Japan Comparison (U.S./Japan) *3)		
Sales	5.6 times	5.0 times
No. of Passwords	8.1 times	23.9 times
No. of Domestic Databases	5.1 times	8.3 times

Notes: \*1) The number of databases supplied overseas are figures for 1994 and 1987.

\*2) The number of passwords was determined from the results of a survey conducted by Nikkei BP.  
As of January 1, 1994 and January 1, 1985.

\*3) U.S./Japan ratio is expressed taking values for Japan as 1.

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powerful growth in excess of 20% for three consecutive years. Although there has been negative growth over the past two years, the decreases have been quite small at only 0.9% in 1992 and 1.2% in 1993. In contrast to on-line databases, which barely maintained the level of the previous year, sales of off-line database services dropped considerably, decreasing by 26% and 5%, respectively.

## **1.2 Five-Fold Increase in Number of Domestic Databases**

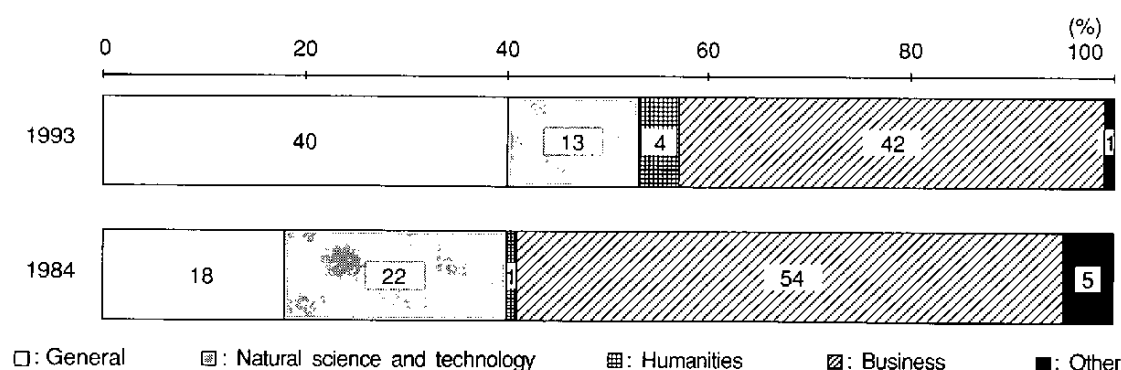
Although the combined number of domestic and overseas commercial databases increased three-fold, the number of domestic databases alone swelled five-fold from roughly 200 to roughly 1,000. As a result of exceeding the rate of increase of overseas databases, the proportion of domestic databases within the total number of databases also increased by 12 percentage points, rising from 22% 10 years ago, to 34%.

To promote a greater number of domestic databases, several measures were taken in terms of taxation and organization. Tax measures for supporting the construction of databases by members of the database service industry were established in 1987 in the form of the "Database Reserve Fund." This was one of the results of the "Proposal for the Promotion of Databases in Japan" compiled in July 1985 by the Congressional Federation for the Promotion of Information Industry whose chairman at that time was Tadashi Kuranari, a member of the House of Representatives. In addition, the Database Promotion Center (DPC) began providing financial support to private corporations and industry groups for the construction of databases and the development of technology in the form of the "Database Construction and Technology Development Promotion Project" starting in 1984. As a commissioned project of the Ministry of International Trade and Industry (MITI), DPC also conducted a feasibility study on the construction of databases in its "Development Program Surveyed for Important Databases" starting in 1986.

The number of domestic databases has increased as a result of the above support projects. However, domestic databases account for only 1/3 of the total, and this number must be increased. Furthermore, although the limit on the "Database Reserve Fund" system was initially set at two years, it has been extended starting in 1995.

## **1.3 General Category Demonstrates Rapid Increase**

Among domestic databases, the business category had the largest number of databases 10 years ago handling economic information such as stock and macroeconomic statistics. This category was followed by natural science and technology, general and humanities. This situation indicates that database services started by providing information to corporations (Fig. I-1).



**Figure 1-1 Changes in Domestic Databases by Category**

Ten years later, however, although the business category continues to account for a large number of domestic databases, the number of databases in the general category has grown considerably, reaching a level comparable to that of the business category. In terms of actual numbers, the general category increased roughly 12-fold. The order by category is currently business, general, natural science and technology and humanities. Thus, the positions of the general category and the natural science and technology category has reversed. It is also noteworthy that the proportion of the natural science and technology category has decreased to 13%.

The general category includes subcategories such as newspapers, journals and news, who's who/organizations, and a recreation and leisure facilities guide. This is a category in which it is difficult to provide service unless the database is a domestic one, since information is provided regarding events, newsmakers, corporations, recreation sites and so forth in Japan. While there are 467 overseas databases in this category, this number is rivaled by the number of domestic databases. With respect to the subcategories of who's who/organizations and the recreation and leisure facilities guide in particular, domestic databases outnumber overseas databases, while in the subcategory of newspapers, journals and news, domestic databases are roughly at the same level.

The category that lies in sharp contrast to this is natural science and technology. Overseas databases in this category far outnumber their domestic counterparts by 716 to 129, indicating a large amount of overseas information. This dependence on overseas databases in medicine, chemistry and physics as well as in areas of fundamental research such as electricity, aerospace, energy and the environment is unusual. Domestic databases in this category have only increased by three-fold over the past 10 years. Since they represent only around 10% of all databases, the number of domestic databases must be increased in this category first.

When comparing domestic databases with overseas databases, the business category is positioned intermediate to the two categories (the general category and the natural science and technology category). There are 684 overseas databases, equivalent to approximately 1.5 times

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the number of domestic databases in this category. Domestic databases have increased by approximately four-fold over the past 10 years, but since there were more than 100 to start with, the number remains large despite the category's low growth rate.

#### **1.4 Steady Increase in Databases Supplied Overseas**

DPC first began surveying the overseas supply of domestic databases in 1987. Comparisons are therefore for the period from 1987 to 1994. Although there were only 28 domestic databases being supplied overseas in 1987, that number has increased by more than 12 times to 353 seven years later. As a result, the proportion of domestic databases supplied overseas has increased correspondingly, jumping from 9.5% to 35% during that same time. This increase is the result of a combination of factors, including lower communication costs, increasing efforts to produce English-language databases and the progress of internationalization.

Among databases being accessed from overseas, the general and business categories are used most frequently. These two categories account for more than 80% of total use. Within the general category, newspapers and news account for the majority of use, and in general, nearly all the information used is business information, a result that reflects increasing economic globalization. Although this trend is similar to that in 1987, the proportion of use of scientific and technical information supplied by, for example, the Japan Information Center of Science and Technology (JICST) and the Japan Patent Information Organization (JAPIO), was higher than it is now. In addition, more than 90% is supplied in the form of on-line databases.

#### **1.5 Three-Fold Increase in Participating Organizations**

It is also worth examining the trends of organizations involved in database services. The total number has increased from 75 to 203 organizations over the past 10 years, representing nearly a three-fold increase. Since the market size has only doubled during that time, sales per organization have decreased over that period. Sales per organization being approximately ¥1.3 billion in 1984, but fell to approximately ¥1 billion in 1993, a drop of approximately 25%. This indicates that database suppliers are having more difficulty in generating a profit than 10 years ago.

Members of the database industry include producers, vendors, information brokers, agencies, and so forth. Producers that are involved in the production of databases only increased by 2.3 times over the past 10 years, a level below the overall growth rate. Thus, there is a desire for more companies to enter this area especially owing to its importance with respect to being responsible for the construction of domestic databases.

## 1.6 Users Increase 10-Fold

Findings relating to the number of contracted users were obtained from a survey entitled, "Ranking of On-line Information Service Companies (Vendors) by No. of Contracted Users" by "Nikkei New Media" of Nikkei Business Publications, Inc. In this survey, although the number of contracted users are counted in terms of the number of passwords, trends in the number of users are considered to be roughly proportional to this. From January 1, 1985 and January 1, 1994, the number of users grew roughly 10 times. Over the same period, the number of passwords increased by 300,000 corresponding to an annual average increase of 27%. In addition to the increase in the number of databases, acquisition of large-volume users through gateway connections and expansion of the number of users resulting from the availability of networks have contributed to this solid growth.

**Table I-2 Number of Passwords by Vendor**

Vendor Name	No. of Passwords (as of January 1, 1994)	Index (January 1, 1985 = 1)
Nihon Keizai Shimbun, Inc.	76,459	19.3
TKC Corp.	47,911	12.5
QUICK Corp.	47,000	4.3
JICST	16,400	7.1
Kinokuniya Company Ltd.	14,008	4.7
JAPIO	5,966	4.0
Teikoku Databank, Ltd.	5,736	10.9
Japan Information Processing Service Co., Ltd.	4,550	4.7
Tohan Co., Ltd.	4,530	30.2
KK KYODO News Service	4,300	21.5

The trends in the number of users for each major database service mirror the trends of databases by category previously described. Individual trends are summarized in Table I-2. According to those figures, in contrast to the number of passwords increasing more than 10-fold overall, more rapid growth was demonstrated by Nihon Keizai Shimbun, Inc., TKC Corp., Teikoku Databank, Ltd., Tohan Co., Ltd. and KK KYODO News Service. The information supplied by these companies consists mainly of that in the general and business categories, including newspapers and news, laws, corporate information and book and magazine information. On the other hand, the Japan Information Center of Science and Technology (JICST), Kinokuniya Co., Ltd., Japan Patent Information Organization (JAPIO) and Japan Information Processing Service Co., Ltd., which grew between four and seven-fold supplied information mainly in the category of natural science and technology, including natural science and technology, medicine, pharmaceuticals, science and patent information.

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When looking at the figures by category, the general category demonstrated the largest growth. This is followed by the business category and natural science and technology category. Although perhaps to be expected, trends by category and user trends essentially coincided.

## **2. Future Outlook**

DPC has repeatedly discussed various problems concerning administrative use of information in the "Ad Hoc Committee for Strategic Information Utilization" for two years (in 1992 and 1993). This committee has attempted to improve efficiency and streamline the processing of large-volume, routine and repetitive tasks at the administrative level. A proposal was summarized for promotion of the administrative use of information to process "non-routine thinking tasks" that include making judgments to propose policies, and proceed with their implementation in the future.

Administrative use of information was formally initiated in the form of a five-year plan calling for administrative informatization starting in 1995 following Cabinet approval of the "Basic Plan for Promoting Administrative Informatization" in December 1994.

In looking back over the 30-year history of information use in Japan, efforts to rationalize the processing of large-volume, routine and repetitive tasks were not only made in the administrative sector, but in the private sector as well. These included computerization of reception processing for social health insurance and passport issuing by the administrative sector, and office automation of clerical management tasks such as accounting, sales and inventory management, as well as factory automation of production processes by the private sector. Computerization and information utilization were not employed for non-routine thinking tasks, however.

DPC then established the "Intelligent Resource Utilization Survey and Research Committee" to investigate whether it was time to consider information utilization in intellectual and creative tasks such as judgments, proposals and ideas as the next step in the utilization of information. Discussions on various topics were continued for two years (in 1993 and 1994) regarding the desirable state of advanced utilization of intellectual resources. Those findings were summarized in February 1995 in the "Intelligent Resource Utilization Survey and Research Report."

The main points of that report are as listed below:

- (1) The purpose of information utilization in non-routine thinking tasks is to realize an advanced political, administrative and active, intellectual society based on high-quality decision-making (creation of a high-quality nation).
- (2) Administrative use of information plays the role of a trigger toward the creation of this high-quality nation.
- (3) Active use of intellectual resources encompasses the "founding of a nation based on intellectual resources" aimed at supplying excellent products and services full of creativity



and high added value.

- (4) In contrast to science, which attempts to perceive things by reducing them to basic elements based on Western rationalism, science has appeared on the scene that attempts to comprehensively perceive complex systems and consider them in an all-inclusive manner, thus enabling a discussion of complex and non-linear natural and social phenomena that were handled with difficulty before. In addition, new analytical paths are on the verge of opening up with respect to the data compilation of sensory and visual information, and new analytical techniques are likely to bring about revolutionary changes that go beyond what has been considered to be common sense in the past.
- (5) The framework of society and its behavioral modes are not unrelated to the trends described in (4) above. A major transformation referred to as a paradigm shift is about to take place owing to the development of communications and computer technology.

Moreover, this report also states that, "Intellectual resources are composed of information resources, utilization systems and utilization technology. Information is combined with other information to create new information. Higher order information is created by taking advantage of sophisticated utilization systems and utilization technology that perceive information as a resource and reflect ideas from new viewpoints. This advanced utilization of intelligent resources is essential for the creation of a high-quality nation of the 21st century."

Information resources contain the vast amount of intellectual assets left by predecessors as well as information produced everywhere on a daily basis at present. Many people that use that information: their purpose of use is different, and its value is also different. In addition, when and where this information will be used is not known. It is hoped that this information will be stored in a modern library "Database" both automatically and over a broad range to facilitate effective utilization.



## II Trends of the Database Service Market

### 1. Trends of Database Sales

Database services are classified in the "information service industry" in terms of their industrial positioning.

The "Report of the Survey of Selected Service Industries," containing selected statistics issued by the Ministry of International Trade and Industry (MITI), covers the major services provided by the information service industry, including commissioned data processing (on-line and batch processing), software development and programming (ordered software and package software) as well as database services, and announces the size of this market each year. According to this survey, sales of the information service industry in 1993 were poor due to the current economic recession. More specifically, annual sales in 1993 totaled ¥6.5144 trillion, corresponding to a decrease of 8.6% from the previous year. This was the first decrease recorded since the survey was started (1973) (Table II-1).

The information service industry had previously been considered to be unaffected by business recessions, and sales through 1991 achieved a double-digit growth rate each year. However, the effects of the current Heisei recession were finally felt in 1992. Although growth did not turn negative, the growth rate was held to only 1.2%. In the most recent survey, however, growth finally fell to the negative side (as of November 1, 1993).

**Table II-1 Annual Sales by Various Information Service Sectors**

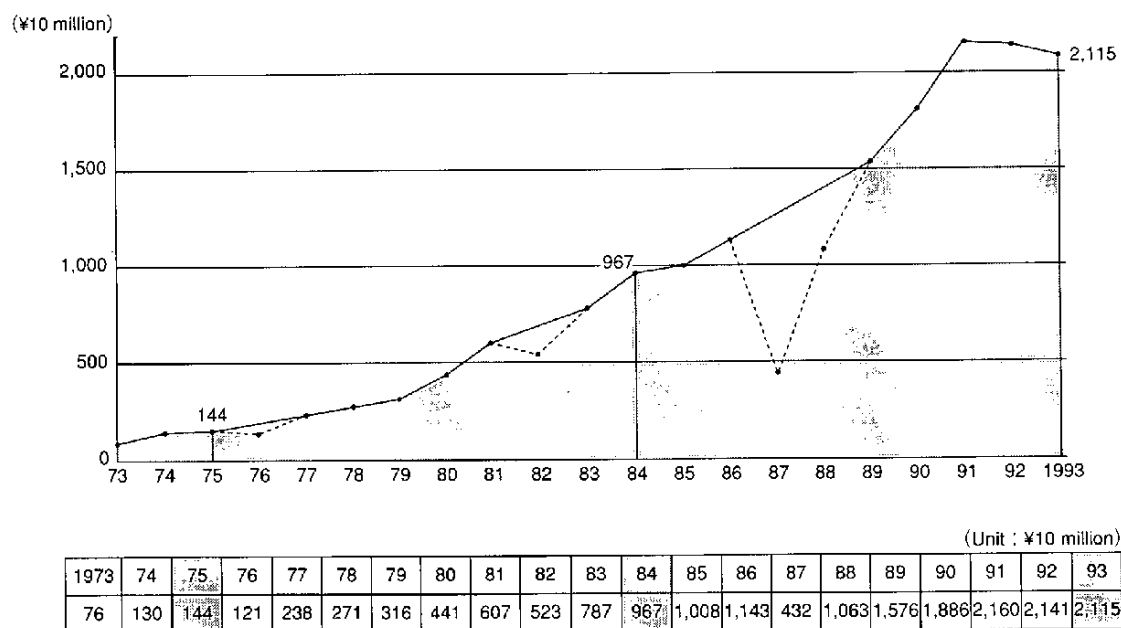
Classification	1992			1993		
	Annual sales (¥ billion)	Ratio(%)	Increase from the previous year(%)	Annual sales (¥ billion)	Ratio(%)	Increase from the previous year(%)
Total	7,127.6	100.0	101.2	6,514.4	100.0	91.4
Data processing	1,100.1	15.4	100.5	1,008.2	15.5	91.6
Software development and programming	4,295.9	60.3	99.9	3,813.3	58.5	88.8
Data entry	201.2	2.8	96.0	191.4	2.9	95.1
Machine time sales	47.2	0.7	79.7	43.3	0.7	91.6
Facility management services	363.4	5.1	117.7	359.1	5.5	98.8
Database service	214.1	3.0	99.1	211.5	3.2	98.8
Various types of research	277.2	3.9	88.4	248.4	3.8	89.6
Miscellaneous services	628.5	8.8	117.2	639.2	9.8	101.7

Source: "Report of the Survey of Selected Service Industries," MITI

Sales of database services were also confronted with severe conditions caused by the current recession. Although sales of database services in the amount of ¥214.1 billion were recorded in 1992, corresponding to a decrease of 0.9% from the previous year, sales fell again to ¥211.5 billion in 1993 (down 1.2%).

Fig. II-1 shows the changes in database sales starting in 1973. Although abnormal values were generated in certain years in the past, and certain factors are unknown, the current reductions in sales is clearly due to the impact of the recession even when considered from the viewpoint of the correlation with the entire information service industry as previously described.

Furthermore, in looking at the changes in sales for the respective 10-year periods of 1975-1984 and 1984-1993, sales increased 6.7 times during the former period, while only increasing 2.2 times during the latter period.



**Figure II-1 Growth in Annual Sales of the Database Service Industry**

Note: Following partial revision of service classifications in 1987, "information supply services" was renamed "database services."

Source: Prepared from "Report of the Survey of Selected Service Industries", MITI

## 2. State of Database Distribution

### 2.1 No. of Databases Approaching the 3,000 Level

According to the 1993 edition of the "Database Directory" issued by MITI, the number of databases that can be accessed in Japan currently stands at 2,980. This directory has been issued annually since its inception in 1982. It is a guidebook for databases available in Japan from a diverse range of viewpoints including category, supply medium and vendor.

The number of domestic databases is continuing to increase (accounting for 33.8% of the total) and currently totals 1,007. This year marks the first time the number of domestic databases has broken the 1,000 mark (Fig. II-2).

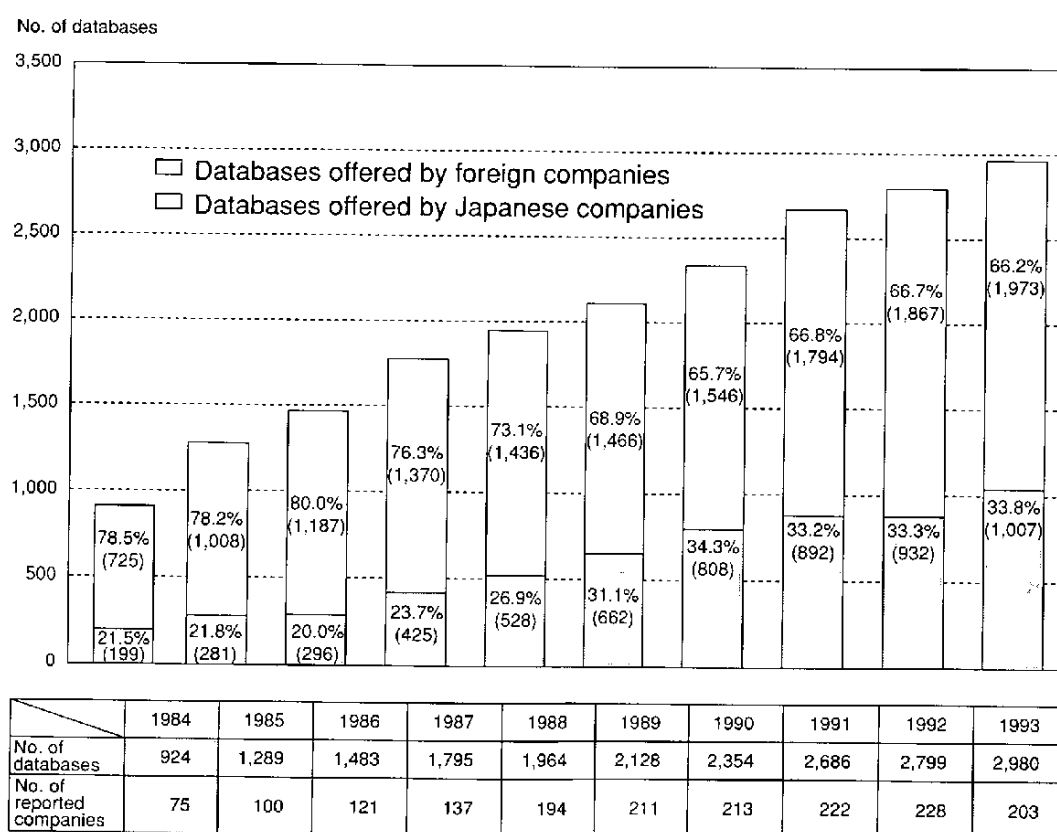
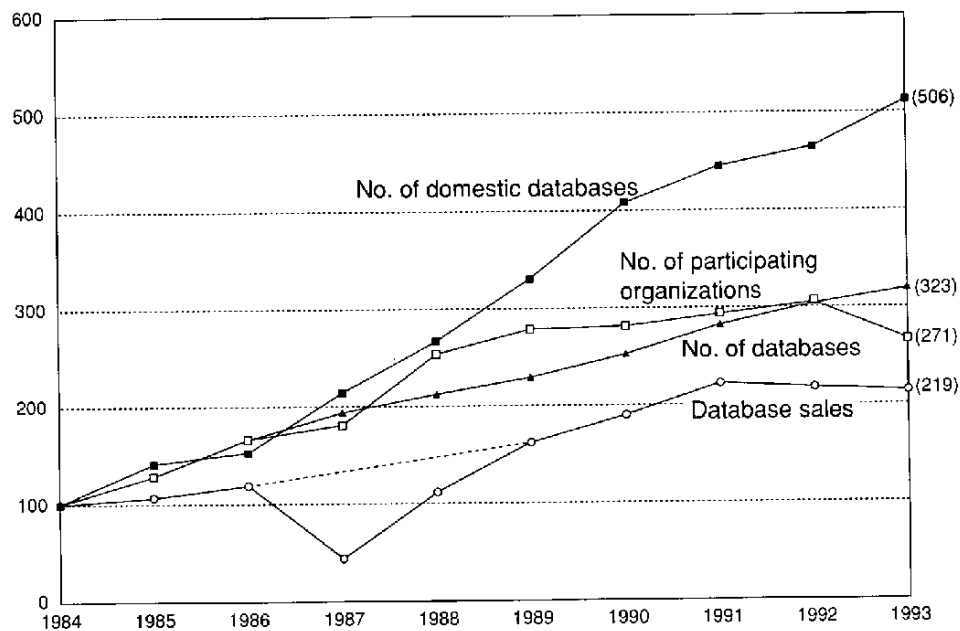


Figure II-2 Changes in the Number of Databases Accessible in Japan over the Past 10 Years

Source: "Database Directory," MITI

The number of companies reported in the directory decreased by 23 from the previous year to 203. In addition, in looking at the business types of these 203 database service companies, the most common type was "producers/vendors," which included 71 companies, followed by "information brokers" at 40 companies, and "producers" at 20 companies. Thus, the number of producers/vendors is still overwhelmingly large.

Furthermore, in looking at changes over the past 10 years, the actual number of databases increased 3.2 times from 924 in 1984 to 2980 in 1993. In addition, the actual number of domestic databases increased 5.1 times, while the number of reported companies increased 2.7 times during that same period (Fig. II-3).



**Figure II-3 Changes in Database-Related Growth over the Past 10 Years (1984 = 100)**

Note: Prepared based on the "Database Directory," the "Survey of Selected Service Industries," among other sources

## **2.2 Distribution State by Category**

Databases accessible in Japan are classified by category. Those categories consist of (1) General (871, 29.2%), (2) Natural Science and Technology (845, 28.4%), (3) Humanities (97, 3.3%) and (4) Business (1,106, 37.1%).

Although there is no change in the trend of the number of databases in the business category being overwhelmingly large, this year the general category moved past the natural science and technology category for the first time. The general category is conspicuous in that it increases the number of databases as a result of being divided into numerous subcategories. Incidentally, the number of databases in the "Newspaper, journal and news" category increased by 51 compared with the previous year. Similarly, databases in the "Health and sports" and "Recreation and leisure facilities guide" subcategories also increased by 12 and 10, respectively.

Those categories in which 100 or more types of databases are distributed consist of the eight categories listed below (Table II-2).

- (1) Newspapers, journals and news (373)
- (2) Corporate finance and profiles (overseas) (256)
- (3) Medicine, pharmaceuticals, biotechnology and biology (178)
- (4) Finance, securities and foreign exchange (154)
- (5) Electricity, electronics and information (128)
- (6) Marketing and products (120)
- (7) General business industry (109)
- (8) Chemistry (106)

Furthermore, when "Newspapers, journals and news" and "Who's who/organizations" information, for which there is a large amount of business use despite being in the general category, is added into the business category, the ratio of the business category exceeds the majority of all use at 52.1%.

**Table II-2 Distribution by Category of Databases Accessible in Japan**  
(Number of Databases)

(continued on next page)

Subcategory		1987	1988	1989	1990	1991	1992	1993
General	General (Encyclopedia and document guide)	45	47	62	66	70	69	69
	Newspapers, journals and news	112	153	192	231	287	322	373
	Who's who / Organizations	42	53	58	62	72	68	75
	Government administration	19	13	26	30	39	38	46
	Laws	25	25	65	67	56	63	67
	Politics	19	19	22	32	40	43	46
	Health and sports	7	11	10	9	14	15	27
	Travel and scheduling	14	5	6	8	7	8	9
	Recreation and leisure facilities guide	15	18	19	31	37	39	49
	Domestic culture and home life	11	15	7	10	9	12	20
	Dictionary and supplementary files	23	23	23	25	31	33	26
	Place names, maps and addresses	4	11	10	13	12	11	7
	Other	20	26	29	37	47	42	57
	<b>Subtotals</b>	<b>356</b>	<b>419</b>	<b>529</b>	<b>621</b>	<b>721</b>	<b>763</b>	<b>871</b>
Natural Science and Technology	General science and technology	42	67	60	73	74	73	61
	Patents	55	64	65	75	79	82	93
	Medicine, pharmaceuticals, biotechnology and biology	104	123	129	140	164	164	178
	Chemistry	58	91	94	97	111	101	106
	Physics	4	4	3	6	6	6	7
	Mathematics	4	2	3	4	4	4	3
	Electricity, electronics and information	64	71	81	115	114	130	128
	Machinery	11	12	11	14	16	18	15
	Construction (civil engineering, architecture)	13	6	13	18	17	18	19
	Space, earth, and marine	17	20	20	21	22	28	31
	Atomic power	2	3	3	3	4	4	4
	Environment and pollution	28	46	45	50	46	48	55
	Energy and resources	23	23	24	26	33	41	48
	Agriculture	16	11	12	13	12	13	12
	Meteorology	12	13	13	13	12	12	12
	Metals and materials	11	17	20	32	39	38	38
	Food	7	7	8	9	9	8	12
	Fibers, lumber and pulp	4	5	5	5	5	5	4
	Other	20	26	22	24	28	23	19
	<b>Subtotals</b>	<b>495</b>	<b>611</b>	<b>631</b>	<b>738</b>	<b>795</b>	<b>816</b>	<b>845</b>

Source: Prepared from the "Database Directory," MITI



**Table II-2 Distribution by Category of Databases Accessible in Japan**  
(Number of Databases)

Subcategory		1987	1988	1989	1990	1991	1992	1993
Humanities	General humanities	10	10	10	11	8	9	10
	Education	12	17	17	15	12	12	12
	Sociology	8	6	6	8	11	7	7
	Vital statistics	9	17	20	26	28	32	34
	Law -	2	1	1	1	2	1	2
	History and political science	2	2	2	2	2	2	4
	Arts (movies, music)	7	7	7	5	9	8	10
	Psychology	4	5	3	3	3	2	2
	Linguistics	2	2	3	2	3	2	2
	Philosophy	1	1	1	1	1	1	1
	Religion	6	7	9	9	8	8	8
	Other	1	2	2	6	6	6	5
	<b>Subtotals</b>	<b>64</b>	<b>77</b>	<b>81</b>	<b>89</b>	<b>93</b>	<b>90</b>	<b>97</b>
Business	General business industry	72	67	62	77	95	93	109
	Marketing and products	98	93	102	109	130	132	120
	Economy (overseas)	127	111	108	71	86	73	71
	Economy (Japan)	54	62	76	82	86	89	87
	Corporate finance and profiles (overseas)	143	139	149	204	238	235	256
	Corporate finance and profiles (Japan)	66	61	66	72	78	88	88
	Accounting and management	16	12	10	10	13	15	16
	Finance, securities and foreign exchange	137	138	140	134	156	156	154
	Energy industry	53	37	38	8	8	15	15
	Communications and broadcasting	20	31	32	27	33	28	38
	Agriculture, forestry and fisheries	11	11	7	10	9	9	5
	Chemical industry	8	9	9	9	10	10	15
	Labor	9	9	8	6	7	6	9
	Architecture and construction	7	4	5	5	6	6	5
	Transportation	16	19	23	16	22	23	27
	Sales and services	7	9	7	7	15	15	15
	Distribution and real estate	4	6	8	10	9	9	7
	Other	30	33	31	39	61	57	69
	<b>Subtotals</b>	<b>878</b>	<b>851</b>	<b>881</b>	<b>896</b>	<b>1,062</b>	<b>1,059</b>	<b>1,106</b>
	<b>Other</b>	<b>2</b>	<b>6</b>	<b>6</b>	<b>10</b>	<b>15</b>	<b>71</b>	<b>61</b>
<b>Grand totals</b>		<b>1,795</b>	<b>1,964</b>	<b>2,128</b>	<b>2,354</b>	<b>2,686</b>	<b>2,799</b>	<b>2,980</b>

Source: Prepared from the "Database Directory," MITI

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### **3. Comparison of Database Conditions in the United States and Japan**

There is no internationally compatible data with respect to databases and information service industries. As a result, accurate international comparisons of these categories are difficult. However, attempting to compare database conditions in the U.S. and Japan, for example, is effective in examining the positioning of database services in Japan.

Here, an attempt to compare the U.S. and Japan is made by taking advantage of various data available in the U.S. and Japan relating to databases. However, since the respective data of each country is used for comparison, the comparison should be used only to provide a rough image of database conditions in the two countries. The following eight parameters were compared:

- (1) Database sales
- (2) No. of passwords
- (3) No. of producers
- (4) No. of participating organizations
- (5) No. of databases
- (6) No. of domestic databases
- (7) No. of business databases
- (8) No. of fact databases

Parameters (1) through (4) are indicators of the strength of the database service industry, or in other words, the strength of the database industry; parameters (5) through (8) are indicators of the state of database distribution.

#### **3.1 Comparison of Database Industry Strength**

In looking at those indicators relating to strength, the database industry in the United States is overwhelmingly superior in all areas. Moreover, the gap has grown larger than in the previous year. Although this was previously mentioned in the section on market trends, the primary cause of this is considered to be sluggishness in the Japanese database industry due to the Heisei recession.

Incidentally, the largest gap appears in the number of participating organizations. In contrast to the U.S. where numbers of producers, distributors (online service companies) and CD-ROM and other vendors increased, in Japan these numbers have either remained unchanged or decreased. Consequently, the number of participating organizations in the U.S. is 12 times larger than in Japan, while there is an 11.5-fold gap between the numbers of producers.

Furthermore, the gap in the number of passwords is more than eight times, while that in terms of sales is just under six times greater in the U.S. The number of passwords for the U.S. includes overseas users. Thus, although this is not a strict comparison, it may be more accurate to compare only overseas users when considering of the market dominance of the English language.

### 3.2 Comparison of the States of Database Distribution

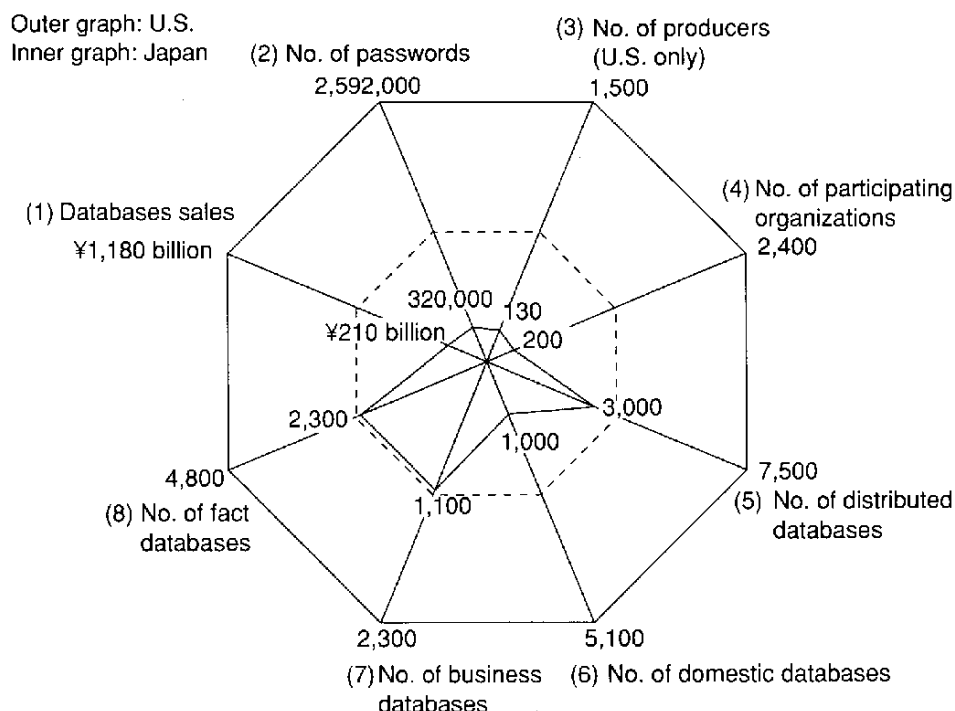
In looking at a comparison of distribution states, the gap is not as extreme as in the case of industrial strength between the U.S. and Japan. This is obvious considering the large number of databases in the U.S. that can be accessed on-line from Japan.

Incidentally, whether looking at the number of databases, the number of business databases or the number of fact databases, the numbers for the U.S. are more than double those of Japan. When the population difference between the U.S. and Japan is taken into consideration (the U.S. population is roughly twice that of Japan), this means that there are essentially no differences in these indicators. However, the figure for the U.S. is five times greater than Japan with respect to the number of domestic databases (Table II-3, Fig. II-4 ).

**Table II-3 Comparison between Japanese and United States Databases (1993)**

Criteria	Japan	U.S.
(1) Database sales	1.0	5.6
(2) No. of passwords	1.0	8.1
(3) No. of producers	1.0	11.5
(4) No. of participating organizations	1.0	12.0
(5) No. of distributed databases	1.0	2.5
(6) No. of domestic databases	1.0	5.1
(7) No. of business databases	1.0	2.1
(8) No. of fact databases	1.0	2.1

Note: Sources and calculation methods are the same as indicated in Figure II-4.



**Figure II-4 Graphical Comparison of Database Circumstances in the U.S. and Japan (1993)**

- Notes: 1. Database sales for the United States indicate approximate figures calculated at the rate of ¥100/US\$ for estimates prepared by LINK Resources Corporation. Sales for Japan according to the "Survey of Selected Service Industries," MITI, 1993.
2. The number of passwords of (2) is as of the end of 1993: Those figures for the U.S. were obtained from the Electronic Information Report (formerly IDP Report) of SIMBA Information Inc., while those for Japan were obtained from the established rankings of "Nikkei New Media". However, the no. of passwords for the U.S. refers to the total for the "business service category" and "financial information service category," and does not include the "general service category" and "computer reservation system category." When these two categories are included, the total number of passwords for the U.S. becomes 7,697,000.
3. Items (3) to (8) for the United States were compiled and analyzed based on the "Gale Directory of Databases" vol. 1 (On-line) and vol. 2 (stand-alone such as CD-ROM), issued in Jan. 1994. Also the figures were based on a dissertation by Martha E. Williams. The numbers for Japan are according to the "Database Directory" (1993).

### III Trends in the Database Service Industry

This chapter provides an introduction to trends in the database service industry of Japan based on the "Survey of Japanese Database Services (Vendor Edition)" conducted by DPC.

#### 1. Positioning of Database Services

What is the manner in which companies providing database services position databases as a form of business? Members of the database industry are engaged in a wide variety of businesses, and database services may not always be their main business. In view of this, companies were asked if they consider database services to be their major business.

As a result, 39.6% of the 134 replying companies indicated that their database business is currently their major business. Of the remaining companies, 50.7% replied that it was not their major business, while those that replied "other" accounted for 9.7%. When companies were asked if they expected databases to be their major business in the future, those who replied in the affirmative jumped to 53.0%. This indicates the emphasis participating companies are placing on databases in the future (Fig. III-1).

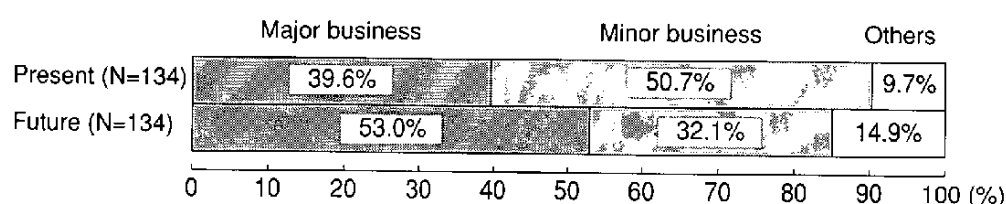


Figure III-1 Positioning of Database Services

#### 2. The Sales of Database Service

The "Survey of Selected Service Industries", a compilation of selected statistics issued by MITI, serves as a source of data relating sales of database services in Japan. According to this survey, sales from database services in 1993 totaled ¥211.5 billion.

In this section, an attempt is made to gain an understanding of trends relating to database sales from several viewpoints listed below to determine the positioning of databases as a business.

- (1) Ratio of database sales to company gross sales
- (2) Ratio of Japanese domestic database sales to total database sales
- (3) Ratio of database sales by supply method
- (4) Year-on-year growth rate of database sales
- (5) Estimated growth rate of database sales over the next five years
- (6) Estimated growth rate of sales of the entire database industry over the next five years

## 2.1 Ratio of Database Sales to Company Gross Sales

Looking at 94 companies from which replies were received, the overall average ratio of database sales to company gross sales is 27.1%.

Incidentally, the ratios over the past seven years since this survey was first conducted consist of 17.7% (1988, no. of replying companies: N=69); 21.6% (1989, N=88); 23% (1990, N=81); 24.4% (1991, N=101); 22.9% (1992, N=97); 23.9% (1993, N=92); and 27% in the most recent survey. Although this ratio temporarily decreased in 1992, the ratio of database sales to company gross sales has consistently demonstrated an increasing trend (Fig. III-2).

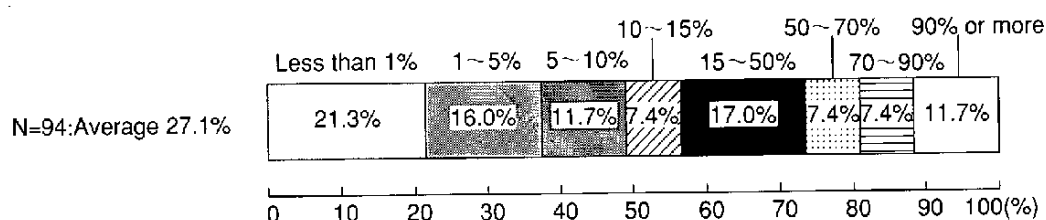


Figure III-2 Distribution of the Ratio of Database Sales to Company Gross Sales

## 2.2 Ratio of Japanese Database Sales to Total Sales

The ratio of Japanese database sales to total database sales is 87.8% for all 119 companies replying. In 1988, this ratio was 82%, followed by 84% (1989), 87% (1990) and 86% (1991, 1992 and 1993). The value obtained in the current survey is the highest ever recorded. These figures indicate that nearly 90% of database sales in Japan come from domestic databases, a pattern opposite to the comparison of the number of distributed databases. Incidentally, domestic databases account for 33.8% of the databases that can be accessed in Japan (1993 edition of the Database Directory).

### 2.3 Sales Ratio by Supply Method

There is a clear difference between domestic and overseas databases when database sales are compared by supply method. More specifically, in contrast to only 54.7% of domestic databases being supplied on-line, the number of overseas databases supplied on-line is overwhelmingly large at 73.0%.

In the case of domestic databases, there is a diverse range of service forms, including magnetic tape (MT) at 15.0%, CD-ROM at 6.7% and other forms at 23.6%. On the other hand, a different pattern is demonstrated in the case of overseas databases, with MT only accounting for 1.9% (Fig. III-3).

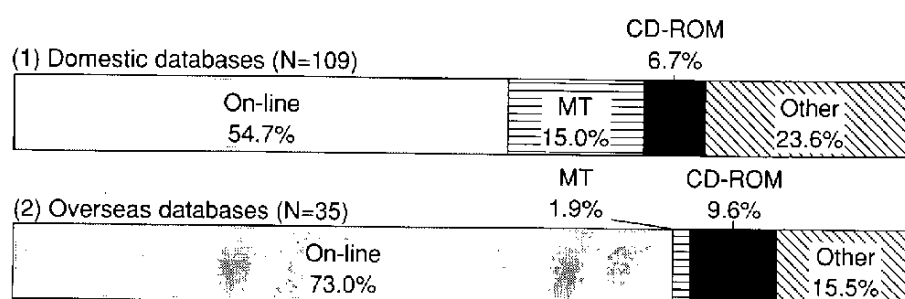


Figure III-3 Ratio of Database Sales by Supply Method

### 2.4 Growth Rate of Database Sales

The results of recent surveys relating the growth rate of database sales clearly reflect the prolonged business recession. Similar to last year, the results are particularly poor with respect to the growth rate compared with the previous year. Although the overall average for the 111 replying companies was 12.1%, which is nearly equal to that of the previous year (11.2%), in looking at the distribution of the range of the growth rate, the range of negative growth rate compared with the previous year increased from 16% to 25%. In addition, when those companies that registered negative growth or no growth are combined, they account for 44.1% of the total. This figure also exceeds the level of 36.2% of last year (Fig. III-4).

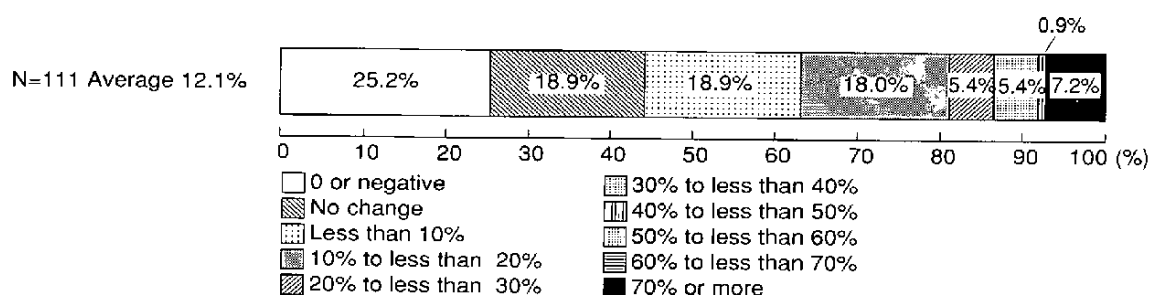
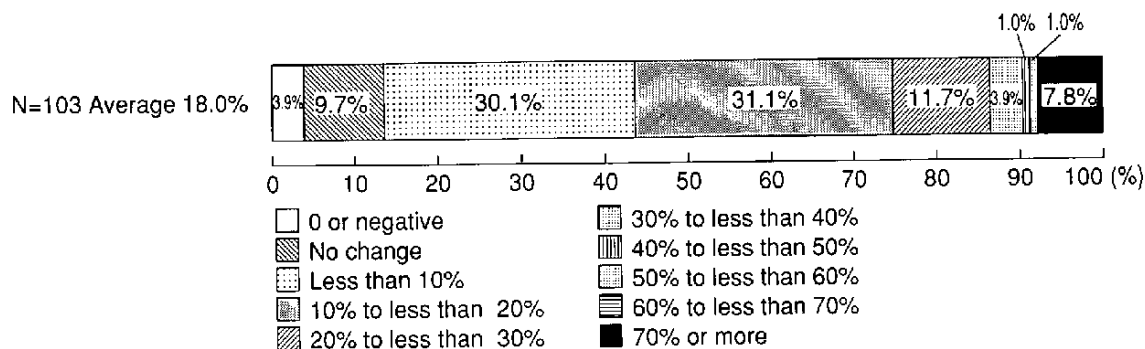


Figure III-4 Distribution of Year-on-Year Changes in Database Sales

## 2.5 Expected Growth Rate of Future Database Sales (Corporate Level)

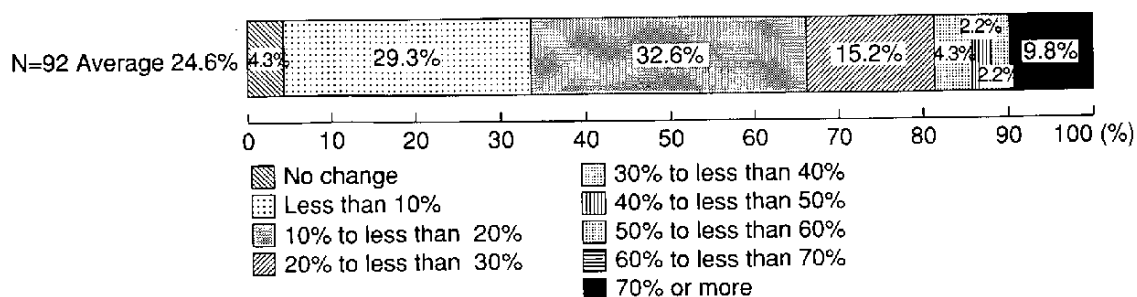
When companies were asked to predict the average annual growth rate of database sales by corporations over the next five years, among those replying the overall average was 18%, down 1.2 percentage points from the previous year (no. of replies: 103). Moreover, some companies indicated a considerably severe outlook, with 3.9% predicting negative growth and 9.7% predicting no change (Fig. III-5).



**Figure III-5** Distribution of Expected Annual Average Growth Rate of Database Sales over Five Years (Company Level)

## 2.6 Expected Growth Rate of Future Database Sales (Industry Level)

Not a single company predicted a negative annual average growth rate over the next five years at the industry level. The overall average of the replying companies was 24.6% (no. of replies: 92), representing an increase of 4.7 percentage points compared with the previous year. The reply for which there was the largest range in growth rates was "10-20%" at 32.6% (Fig. III-6).



**Figure III-6** Distribution of Expected Annual Average Growth Rate of Database Sales over Five Years (Industry Level)



### 3. Media Holding the Highest Expectations

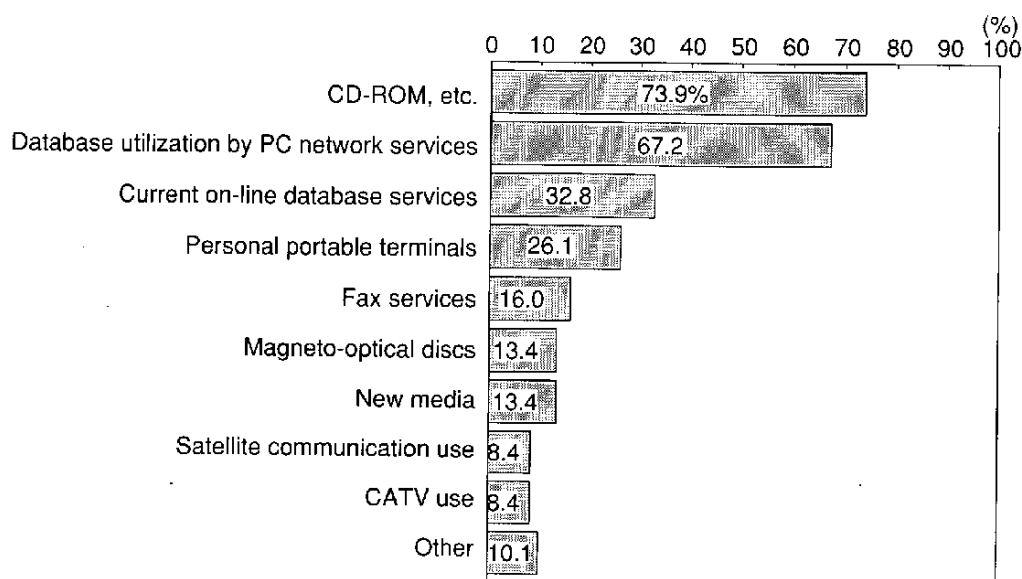
What then is the media for which there are the highest expectations in the next five years from the viewpoint of companies supplying database services? Companies were given a selection of major media forms and asked to select the top three forms for which they had the highest expectations. They were also asked to predict the annual growth rate for each of those forms.

#### 3.1 Media Holding the Highest Expectations

"CD-ROM" was overwhelmingly selected by the most companies, being named by 73.9% of the 119 replying companies (multiple replies). Compared with the results of the previous survey (84.2%), this figure is down by 10.3 percentage points.

"Database utilization by PC network services" came in second place, being selected by 67.2% of the replying companies and representing an increase of 14.7 percentage points from the previous survey. Furthermore, the order of the top five media having the highest expectations remained the same as last year. However, "Personal portable information terminals", ranked fifth last year at 24.2% and moved up to fourth place (26.1%), changing places with "Fax services."

Furthermore, services by "Internet" was the most common reply that companies entered on their own for the "Other" category (Fig. III-7).



**Figure III-7 Media Expected to Demonstrate the Highest Growth over the Next Five Years (N=119, multiple replies)**

Note: The "Other" reply consists mainly of service using "Internet".

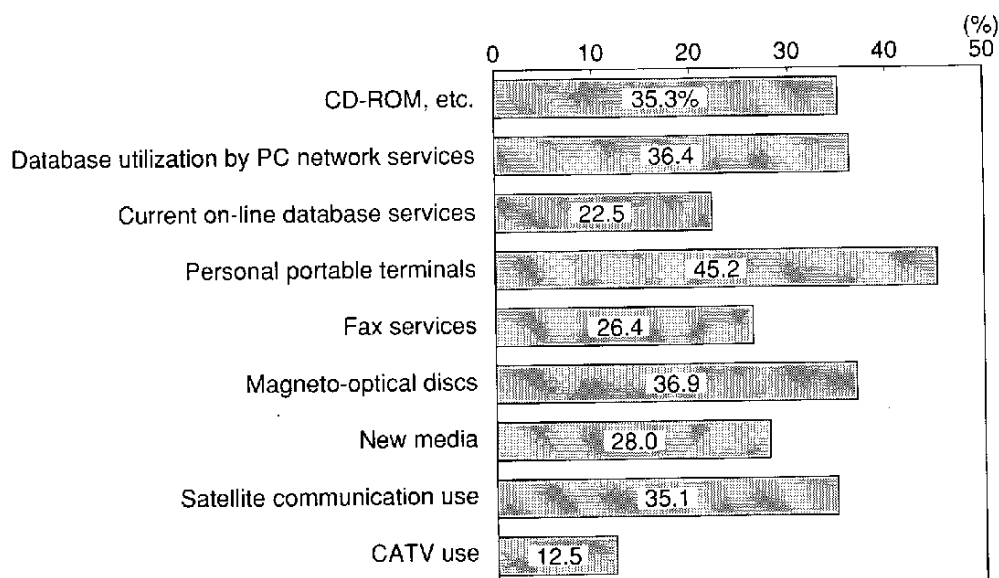
### 3.2 Predicted Growth Rates

A 35.3% annual average growth rate was predicted for "CD-ROM" over the next five years, the highest among media forms.

"Database utilization by PC network services," ranked second in terms of expectations, with a value of 36.4%, slightly exceeding that for CD-ROM. "Current online database services," ranked third at 22.5%, somewhat lower than other media forms. This may be due this media form having reached maturity compared with others.

"Personal portable information terminals" were predicted to demonstrate the highest growth rate, expected to demonstrate an annual growth rate of better than 45%.

Although "Fax services" was predicted to have the highest growth rate among all media forms in last year's survey (37.8%), its growth rate was predicted to only be 26.4% in the current survey (Fig. III-8).



**Figure III-8 Annual Average Growth Rates of Media Expected to Grow over the Next Five Years (Forecast)**

### 3.3 Service Images Holding the Highest Expectations

When replying companies were asked to freely describe the image of database services expected to demonstrate the highest growth over the next five years, most of the replies given were based on CD-ROM. Although 69 replies were received from 63 companies, 24 of those used CD-ROM as the key word (34.8%). The most frequently mentioned of these was "Text and image mixed database services by CD-ROM." In addition, although the replies did not always describe database services by CD-ROM, there were also nine replies that simply referred to image type or

multimedia database services.

There were also high expectations with respect to "Database services by Internet," "Database utilization by PC network services" and "Transaction-type database services."

#### **4. Distribution of Databases**

Among producers there are those that distribute databases on their own as well those that commission distribution to another company. Producers that distribute databases are so-called producer/distributors; producers that leave everything to another company are exclusively producers. Companies that distribute their own databases while also commissioning distribution to other companies are also regarded as producer/distributors.

Sixty of the 79 producers replying indicated that they supply databases on their own (75.9%, multiple replies). Thirty-six producers commission supply to other firms (45.6%). Thus, many producers have taken on the role of producers/vendors. At the same time, since nearly half of all producers commission supply of databases to other vendors, it appears that distribution methods are becoming increasingly diverse.

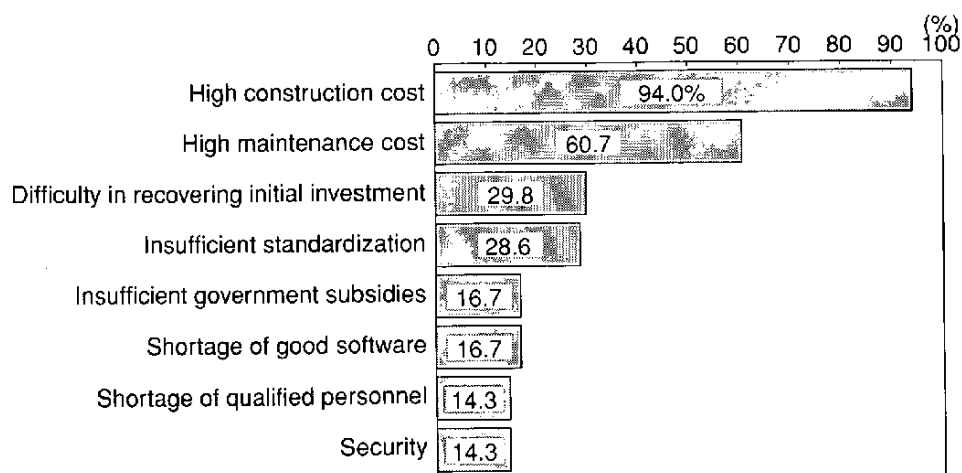
Furthermore, the most common reply for the number of distributors commissioned by a producer was "one company" at 38.5%. This was followed by "two companies" at 20.5%. The average was 3.4 companies.

#### **5. Problems in Database Construction**

For producers, a major problem in creating databases is cost. This has remained unchanged since this survey was started. In looking at the replies from 84 companies, the greatest problem was the "cost of construction work including collection and entering of data." This was indicated by 94.0% of the companies, representing an increase of 5.1 percentage points from the previous year.

The other reasons among the top three given were "maintenance cost" (60.7%) and "difficulty in recovering initial investment" (29.8%). Thus, the problem relates to cost in all cases.

Furthermore, despite also relating to cost, the reply, "Insufficient government subsidies" decreased 4.1 percentage points from the previous survey. On the other hand, "insufficient standardization" as a reply increased significantly by 16.1 percentage points compared with the previous survey (Fig. III-9).



**Figure III-9 Problems in Database Construction (N=84, multiple replies)**

## 6. Utilization of Public Data

This area was added to the survey for the first time this year to investigate the manner in which the public data produced by government agencies and so forth is used, as well as what problems are encountered.

When producers were asked if they were using public data as source data for databases, 78 companies or 42.3% replied that they were. In addition, with respect to the reasons for using public data, "reliability of data" was indicated by 68.8% of the companies, while "updated annually or regularly" was indicated by 56.3%, thus indicating considerable support (Fig. III-10).

With respect to the types of public data currently being used, numerical data such as statistics is used much more than character data. Particularly frequently used types of numerical data include "General business industry" (42.4% of 33 replies), "Population, employment and labor" and "Domestic economy, business climate and finance" (39.4% each).

With respect to character data, the most frequently used type of data is "Government white papers and related documents" at 21.2%. The "Other" category had the largest number of replies for character data. Some examples of the replies that were written in include city planning data, government reports, judicial precedents and monthly economic reports (Fig. III-11).

Next, with respect to problems encountered in utilizing public data, by far the most common reply given was "Supply form of public data used is on paper and not digitized." This was indicated in 55.6% of the replies. Many of the other problems indicated were related to utilization procedures, including "Bothersome procedures" (25.9%) and "Lack of uniformity of the data supplier" (22.2%). In addition, problems pointed out in the "Other" category included the late announcement of data.

Conversely, the most of ten reason given for not using public data was "Desired data is not available," indicated in 42.9% of the replies. Additional reasons included "Not digitized" (21.4%), "Lack of uniformity of the data supplier" (16.7%) and "High usage fee" (11.9%).

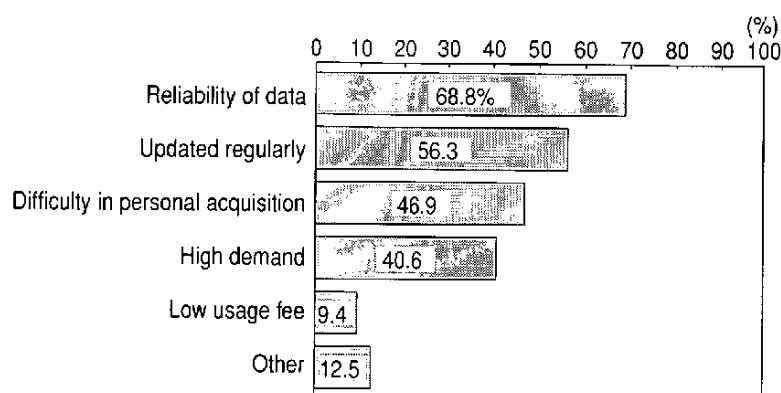


Figure III-10 Reasons for Using Public Data (N=32, multiple replies)

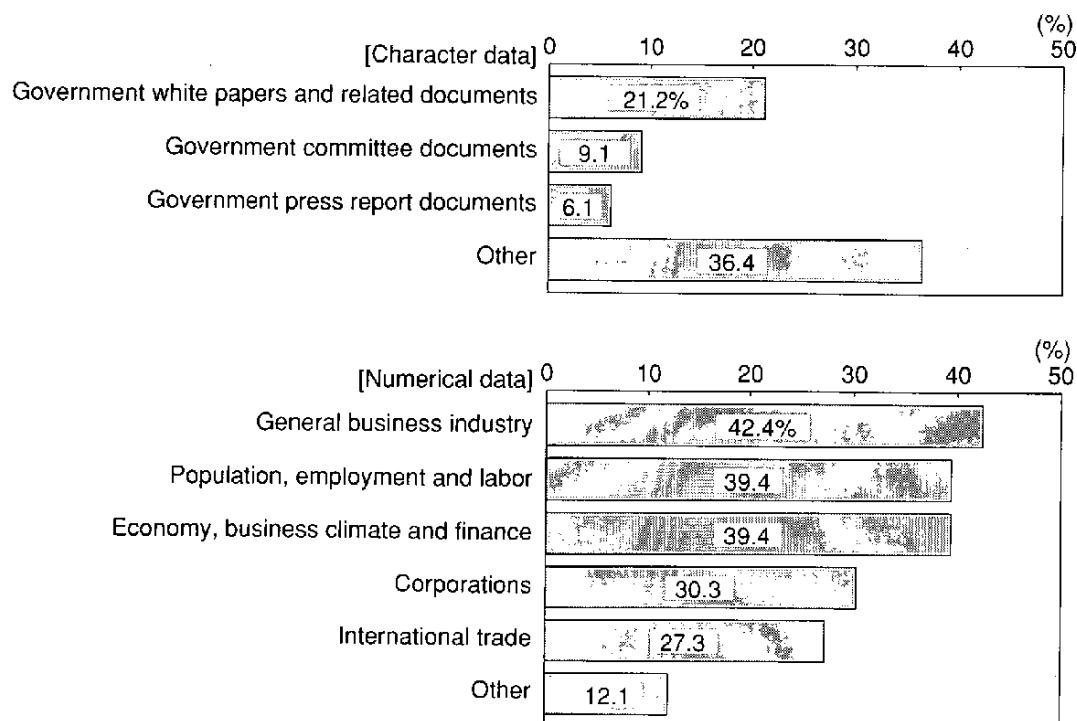


Figure III-11 Currently Used Public Data (N=33, multiple replies)

Note: City planning data, government reports, judicial precedents, monthly economic reports and so forth are contained in the "Other" category of character data.

## 7. Types of Data (Text, Image, Visual, etc.)

This question was incorporated into the survey starting last year in order to investigate the what types of data are being supplied (or scheduled to be supplied in the future) on both on-line and off-line commercial databases.

### 7.1 Data Currently Being Supplied (or Scheduled to be Supplied)

To begin with, the top three types of data currently being supplied on-line consist of (1) text (fact) data at 65.3%, (2) text (reference) at 54.2%, and (3) numerical data at 45.8%. These results are similar to those of last year (no. of replies: 72, multiple replies). However, although text (reference) data ranked first last year, text (fact) data was ranked top in this year's survey, reflecting the growth of full text information.

Furthermore, although there were no large changes from last year in the ratios of "image" and "voice" data, currently attracting attention in multimedia, "Video (animated pictures) increased slightly, from zero replies last year to one reply this year (1.4%) (Fig. III-12).

On the other hand, with respect to the types of data supplied off-line, although the top three types are the same as for on-line supply, the ratios are all lower. In contrast, the ratios for image data, voice data and video data are all higher. In particular, "Images (still pictures, photographs)" jumped from 12.5% on-line to 23.6% off-line (Fig. III-13).

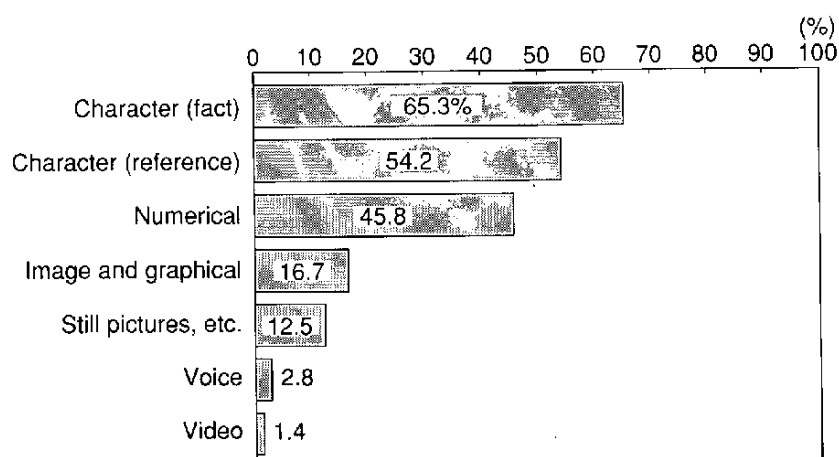
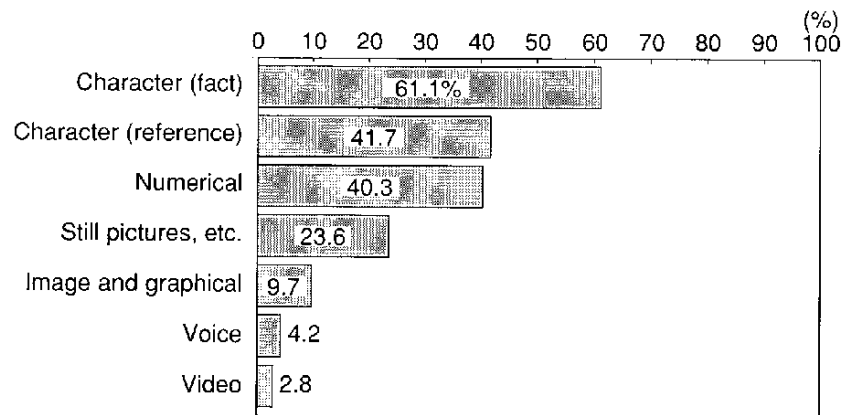
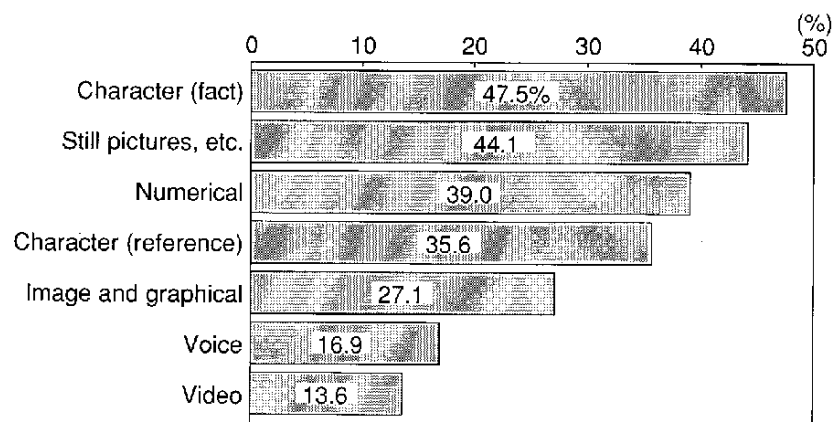


Figure III-12 Types of Data Currently Supplied Online (N=72, multiple replies)

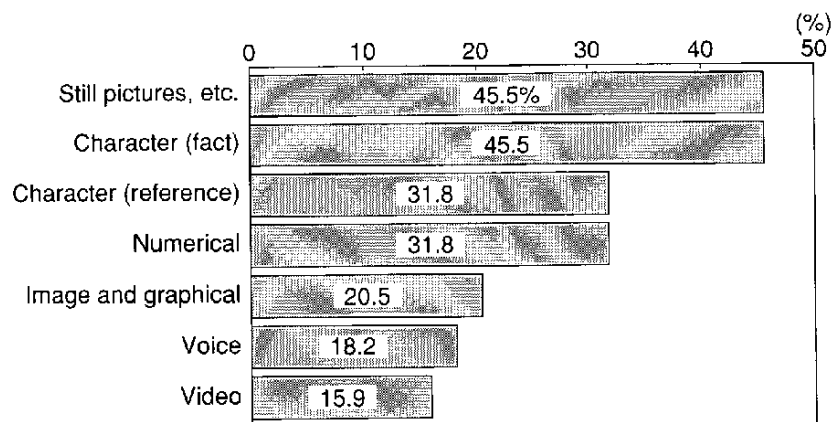


**Figure III-13 Types of Data Currently Being Supplied Off-line (N=72, multiple replies)**



**Figure III-14 Types of Data Desired to be Supplied On-line (or to be Increased) in the Future (N=59, multiple replies)**

In looking at data desired to be supplied in the future (or desired to be increased in the future), there were no large changes from the pattern observed for currently supplied data. More specifically, although text (fact) data was ranked first for on-line data (47.5%), it was followed closely by "Images (still pictures, photographs)" at 44.1% (no. of replying companies: 59, multiple replies) (Fig. III-14).



**Figure III-15 Types of Off-line Data for Which There Is Future Demand (or for Which an Increase in Supply Is Sought) (N=44, multiple replies)**

In the case of data supplied off-line, the types ranked first and second above again occupy the top two places, accounting for 45.5% of the total. In addition, image and graphical data (graphs, drawings), voice data and video data also demonstrate high ratios at roughly 20% each (Fig. III-15).

In looking at these figures, together with text and numerical data continuing to remain popular with database vendors, movement towards multimedia applications is steadily progressing both for on-line and off-line supply.

## 7.2 Positioning of Image and Video Data

Those companies supplying image and video data were asked about the positioning of that data, while those companies not supplying those types of data were asked about their plans for the future. With respect to the current positioning of these types of data, it appears that genuine efforts to supply this data are not yet being made. In looking at the replies from 32 companies, the most common reply was "Partial service" indicated by 34.4% of those companies (multiple replies). This was followed by "Extremely small-scale service" (28.1%) and "Experimental service for the future" (28.1%). Only four companies replied that these types of data were their "Main service" (12.5%).

In looking at plans for supplying these types of data in the future, the most common reply was "Not considering at present" at 46.6%. This was followed by "Plan on supplying within three years" at 27.4% and "Plan on supplying within one year" at 8.2%. On the other hand, the percentage of those responding "Unknown" decreased more than 10 percentage points from the previous year, indicating that the plans of suppliers with respect to image and video data is gradually becoming clearer.



## 8. Database Supply by CD-ROM

### 8.1 Whether or Not CD-ROM Databases Are Being Supplied

Thirty-eight of the 104 replying companies (36.5%) are supplying databases by CD-ROM, and this ratio is increasing each year. Incidentally, the ratios of this supply over the past five years are 19.6% in 1990 followed by 24.8%, 26.3%, 30.8% and 36.5%, thus depicting an increasing trend (Fig. III-16).

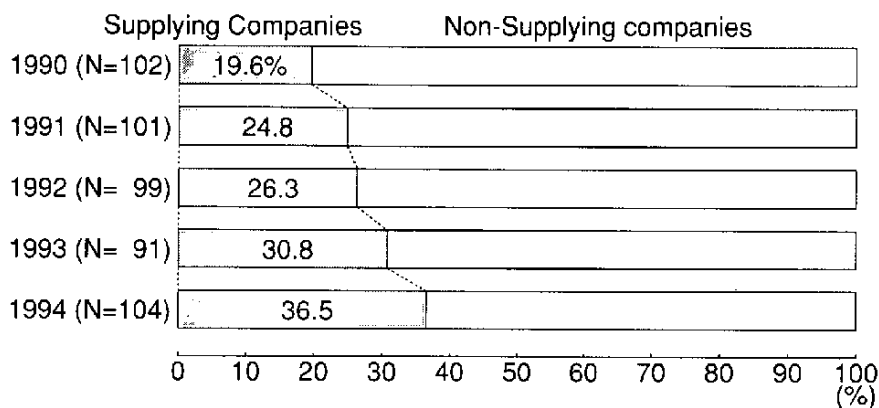


Figure III-16 Whether or Not CD-ROM Databases Are Being Supplied

### 8.2 Categories of CD-ROM Databases

Replies were obtained from 37 companies regarding those categories in which CD-ROM databases are being supplied. According to those results, 25 companies are supplying databases in the "General" category, 16 in the "Business" category, and 15 in the "Natural Science and Technology" category. In looking at the most common subcategories, the top five consist of (1) "Magazine, book and periodical information," supplied by eight companies; (1) "Newspapers, journals and news," supplied by eight; (3) "Science, technology and patents," supplied by seven; (4) "Medicine, pharmaceuticals, biotechnology and chemistry," supplied by six; and (5) "Corporate finance and profiles," supplied by five (Table III-1).

**Table III-1 Supply Status of CD-ROM Databases (No. of Companies)**

	Currently supplying (N=37)	Scheduled to supply in the future (N=37)
[General]	[25]	[16]
Audio-visual, games, entertainment	1	1
Dictionary, encyclopedia and document guide	3	3
CAI	1	—
Magazine, book and periodical information	8	4
Who's who	4	1
Newspapers, journals and news	8	7
[Business]	[16]	[22]
Finance, securities, foreign exchange and market information	2	4
Standards	—	1
Corporate finance and profiles	5	5
Economics and business	3	4
Maps and mapping, telephone numbers and address codes	1	4
Statistics and populations	1	1
Laws, regulations, precedents, taxes and tax information	4	3
[Natural Science and Technology]	[15]	[12]
Medicine, pharmaceuticals, biotechnology and chemistry	6	5
Energy, resources and the environment	2	—
Science, technology and patents	7	3
Computers and software	—	1
Architecture and construction	—	1
Mathematics and agriculture	—	1
Materials and components	—	1
[Humanities]	[0]	[2]
Arts, culture, literature and history	—	1
Library and information science	—	1
[Other]	[3]	[1]
Grand Totals	59	53

## 9. Internet Utilization

### 9.1 Whether or Not Internet is Used and the Reasons

This area was included in this survey for the first time this year. The purpose of this question was to gain an understanding of the manner in which database service companies are using Internet, the currently popular communications tool used for electronic mail, information acquisition and member forums.

Among the 103 companies replying, seven companies (6.8%) are "Providing" database services via Internet. In addition, 13 companies (12.6%) are "Plan to provide" such database services. Although still few in number, this means that just under 20% of the replying companies are either providing database services or planning on providing database services by Internet (Fig. III-17).

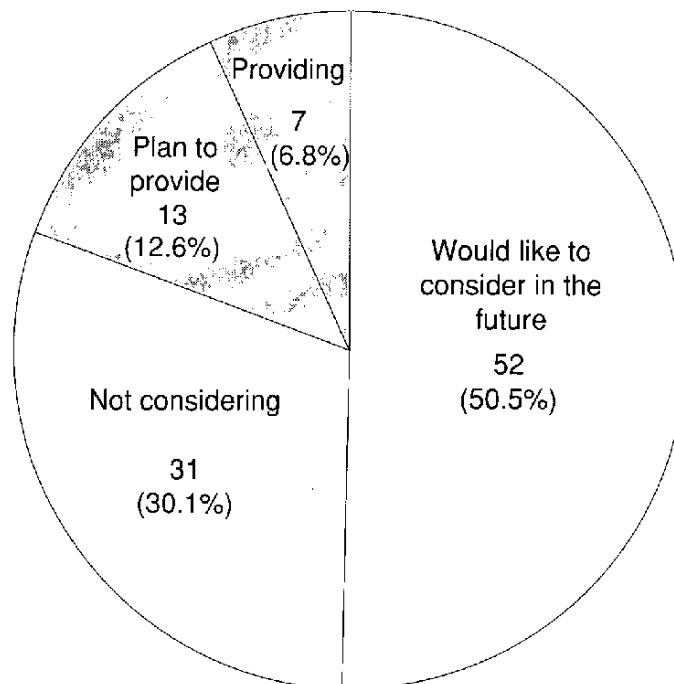
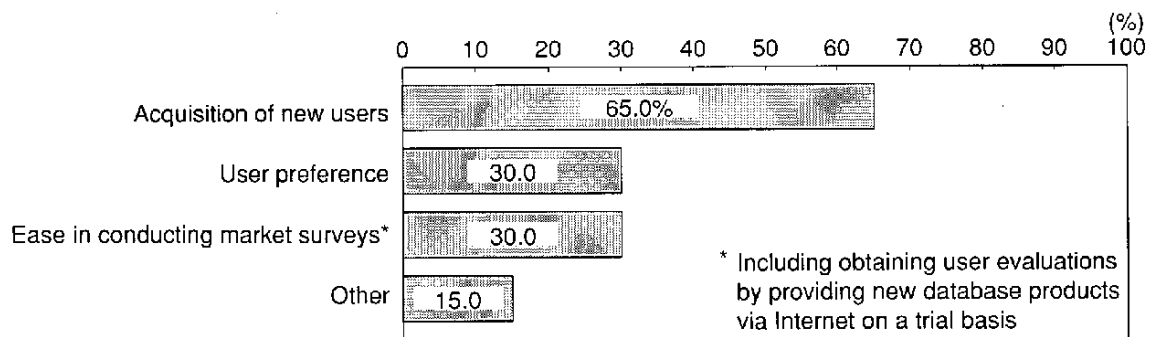
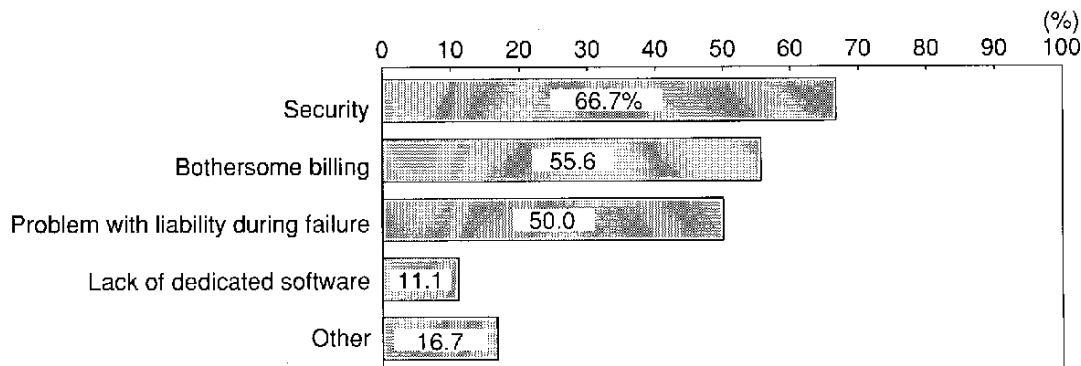


Figure III-17 Status of Providing Database Services via Internet (N=103)



**Figure III-18 Reasons for Providing or Planning to Provide Database Services via Internet (N=72, multiple replies)**



**Figure III-19 Nature of Concerns and Problems Relating to Internet Use (N=18, multiple replies)**

Note: "High cost of dedicated line" and other replies are included in the "Other" category.

When those companies were asked their reasons for their actual or planned involvement with Internet, "Expectations for acquisition of new users" was overwhelmingly the most common reply at 65.0% (Fig. III-18).

## 9.2 Concerns/Problems with Using Internet

When those companies either currently providing or planning to provide database services via Internet were asked if they had any concerns or problems with using Internet for that purpose, 90.0% replied that they "Have concerns or problems." Those without any concerns or problems accounted for only 10.0%.

Next, with respect to the contents of those concerns or problems, the most common reply was "Concern over security" (including viruses, hackers, loss of data) at 66.7%. Other replies

included complex billing or lack of clarity with regard to liability when a failure occurs, at higher than 50% each. Other replies pointed out the problem of being unable to supply databases desired by users due to not having dedicated software (Fig. III-19).

In addition, with respect to reasons why companies are not considering providing database services via Internet, "Merits not well-defined" was overwhelmingly the most common reason, given by 43.8% of the replying companies (N=64, multiple replies). Other reasons indicated problems with security, billing and liability similar to those listed for concerns and problems. On the other hand, more than 23% of the replying companies indicated a "lack of understanding of the structure of Internet," backing up the theory that Internet has not yet become established in the industry.

## 10. Present State of Overseas Database Supply

The Japan Database Industry Association (DINA) was commissioned by DPC in June 1994 to conduct "Survey of the Overseas Supply of Domestic Databases" targeting DINA members, DPC supporting members and other organizations engaged in database services. Survey forms were sent to 200 organizations from which replies were obtained from 126 (response rate: 63.0%).

There were 41 replying organizations that are supplying database services for overseas users, and 11 that plan to supply such services. The number of databases being supplied overseas from Japan has continued to increase over the past seven years. The number of domestic databases being supplied overseas stood at 353 as of June 1994. This corresponds to an increase of 15.4% from the previous year (Fig. III-20, Table III-2).

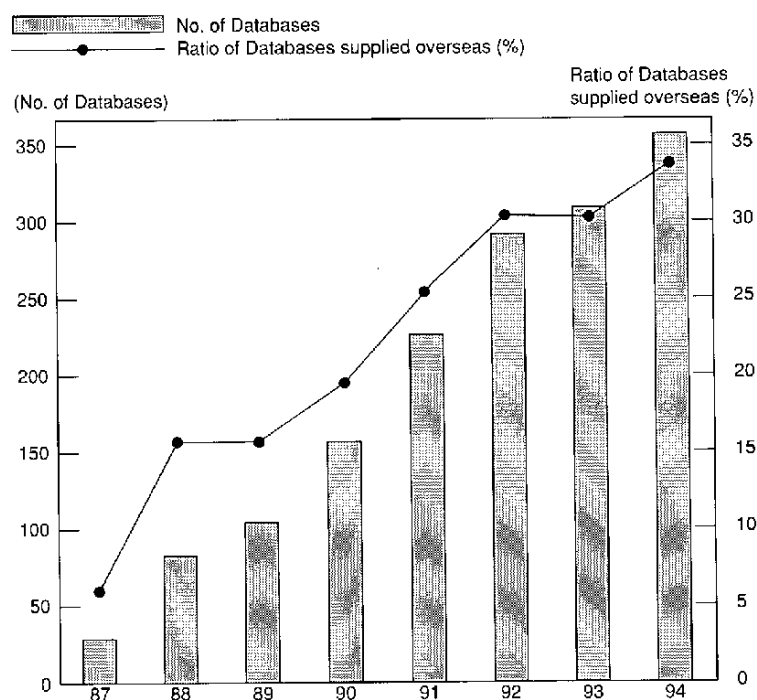


Figure III-20 Growth in Databases Supplied Overseas

Table III-2 Number of Domestic Databases Being Supplied Overseas (Actual Numbers)

Item \ Time of Survey	1987	1988	1989	1990	1991	1992	1993	1994
No. of Databases and	28	83	104	155	226	290	306	353
Proportion Supplied (%)	(6.6)	(15.7)	(15.7)	(19.2)	(25.3)	(31.1)	(30.4)	(33.7)

Note: Proportion Supplied = No. of Domestic DB Supplied Overseas/Total No. of Domestic DB

The distribution of these 353 databases by category consists of 27 databases in the category of science and technology (7.6%), 145 in the category of economics, business and finance (41.1%), and 168 in the general category (47.6%).

In addition, in looking at the distribution by language, 225 of these databases are in Japanese (63.7%), 69 in English (19.6%), four in other languages (1.1%), 50 in both Japanese and English (14.2%) and five in English and other languages (1.4%).

In looking at supply forms, there are 264 on-line databases (74.8%), 37 offered on magnetic tape (10.5%), nine offered on CD-ROM/CD-I (2.5%), 27 offered on-line and on magnetic tape (7.6%), two offered on-line and on CD-ROM/CD-I (0.6%), 13 offered on-line and on magnetic tape, CD-ROM and CD-I (3.7%), and one offered on magnetic tape and on CD-ROM/CD-I (0.3%).

With respect to the proportion of database sales generated overseas, 59 of the 63 organizations replying to this question (93.7%) answered 5% or less. There were two organizations (3.2%) that replied that overseas sales accounted for 6-10% of database sales. There were two organization (3.2%) that replied that overseas sales accounted for 51% or more of its total database sales. Furthermore, the organizations that replied that overseas sales were 51% or more created their databases in English in accordance with overseas needs. These suppliers provide their databases on-line through a system having service outlets located overseas. In addition, one of those organizations is the Japanese representative of an overseas corporation.





## **IV Use of Commercial Databases**

### **1. Summary**

According to the "Survey of Japanese Database Services (User Survey)" conducted by DPC in 1994, an overall average of 66.9% of the replying companies presently use database services. In terms of company size, 51.5% of small and medium-sized businesses presently use database services. This number increases to 71.4% in the case of large companies. By industrial category, oil/chemistry leads the way at 91.5%, followed by business-to-business service companies at 74.6%, construction companies at 72.1% and electric/general/transport machinery manufacturing at 71.6%.

### **2. Usage Results and Forecasts**

Table IV-1 indicates the actual results for 1993 and the amounts planned for 1994 for the average annual monetary amount of database usage per replying company by company size. The ratio of the monetary amount of Japanese database usage to that of foreign database usage in 1993 is approximately 8:2, which is almost the same result as obtained in the previous surveys. This indicates that the monetary amount of Japanese database usage is overwhelmingly large.

The average amount spent on database usage is ¥2.705 million per company for small and medium-sized businesses, and ¥40.907 million for large companies. This indicates a 15.1-fold gap between the two groups. Compared with the predictions for 1993 in the previous survey, the amount spent by small and medium-sized businesses grew, while the amount spent by large corporations decreased. The amount spent by small and medium-sized businesses were down by 20.1%, while the amount spent by large corporations were down by 18.8%. This means that small and medium-sized businesses have registered negative growth for two consecutive years. Although there is some deviation in the samples depending on the replying companies for each year, it is thought that these companies are at least somewhat affected by the prolonged business slowdown.

With respect to the outlook for 1994 as well, although growth of 7.3% is expected for public services, small and medium-sized businesses and large corporations are both expected to show decreased amounts of usage.

**Table IV-1 Annual Average Cost for Databases by Company Size**

(Unit: ¥10,000)

Company size	Actual result of 1993 (N=395)			Planned for 1994 (N=393)		
	Japanese databases	Foreign databases	Total	Japanese databases	Foreign databases	Total
Small / medium	201.7 (74.6)	68.8 (25.4)	270.5	200.7 (- 0.8)	68.6 (- 0.3)	269.3 (- 0.4)
Large	3,343.5 (81.7)	747.2 (18.3)	4,090.7	3,265.9 (- 2.3)	775.8 (3.8)	4,041.6 (- 1.2)
Public service	126.0 (75.0)	42.1 (25.0)	168.1	133.6 (6.0)	46.7 (10.9)	180.3 (7.3)
Average of secondary industry	1,272.7 (77.7)	364.9 (22.3)	1,637.7	1,289.4 (1.3)	396.6 (8.7)	1,685.9 (2.9)
Average of tertiary industry	5,722.5 (83.2)	1,152.0 (16.8)	6,874.5	5,411.5 (- 5.4)	1,141.6 (- 0.9)	6,553.1 (- 4.7)
Average	2,392.3 (81.6)	540.1 (18.4)	2,932.4	2,303.2 (- 3.7)	552.6 (2.3)	2,855.8 (- 2.6)

Note: The actual numbers shown in parentheses indicate the proportion of Japanese database usage to foreign database usage, while the figures in parentheses for planned use indicate growth rates compared with the previous year. The units for both are percentages.

Looking at the average monetary amounts of database usage by industrial category for 1993, the amount for "Finance/insurance" runs far ahead of the others at ¥392.518 million. This is followed by "Other manufacturers" at ¥33.692 million; "Other service for the establishments," at ¥27.289 million; and "Commerce," at ¥15.119 million. When compared with the actual results for the average monetary amount of usage in 1992, there is negative growth for nearly all industrial categories. Those industrial categories registering positive growth were "Steel, non-ferrous and metal manufacturers" (up 120%), "Other manufacturers" (up 8.8%) and "Other business services" (up 0.1%).

Although an increase of 12.5% is again predicted in 1994 for "Other business services," the majority of industrial categories are expected to demonstrate little or negative growth.

The average monetary amount of usage per company for all business categories other than the "Oil and chemical industries" is higher for domestic databases than overseas databases. The dependence of the tertiary industries, in terms of industrial average, on domestic databases on a monetary basis is higher than that of secondary industries. The construction industry demonstrated the highest dependency on domestic databases (94.6%).

### 3. The Types and Contents of Most-Used Commercial Databases

#### 3.1 Most-Used Database Vendors and Database Files

Table IV-2 shows the top five database systems in terms of monetary amount of usage by companies. The systems are ordered starting with the system most frequently listed by the companies replying. Overall, the top-ranking systems listed were JOIS (261 replies, 55.3%), Nikkei Telecom (246 replies, 52.1%), PATOLIS (200 replies, 42.4%), DIALOG (190 replies, 40.3%) and G-Search (105 replies, 22.2%). These five top-ranking systems have remained in the same place over the past several years. Japanese vendors account for the majority of the listings, including those ranked sixth and lower. Looking at these figures by company size, in the case of large companies, the top-ranking systems were Nikkei Telecom (55.7%), JOIS (52.9%), PATOLIS (50.2%) and DIALOG (42.5%). Among small and medium-sized businesses, the top-ranking systems were JOIS (67.2%), DIALOG (47.5%), PATOLIS (39.3%) and Nikkei Telecom (34.4%). JOIS is used frequently by small and medium-sized businesses.

**Table IV-2 Highly Utilized Vendors, According to the Number of Replies (N=472, multiple replies)**  
(Aggregate of top five vendors used by each respondent)

Order	No. of replies	Name of service system
1	261	JOIS
2	246	Nikkei Telecom
3	200	PATOLIS
4	190	DIALOG
5	105	G-Search
6	103	STN INTERNATIONAL
7	48	COSMOS
8	41	ELNET
9	35	NICHIGAI-ASSIST
10	34	BRANDY
10	34	TSR
12	24	DIALINE
13	23	Quick Video-1
14	21	NEEDS-IR
15	16	Reuter Monitor Service
15	16	MAIN

Analysis by industrial category reveals that although Nikkei Telecom is used most frequently among members of tertiary industries, demonstrating a utilization rate of 52.7%, this service ranks only fourth at 51.7% in the average among secondary industries. Thus, users are concentrated in secondary industries for top-ranking systems such as JOIS and PATOLIS, and there is a large discrepancy in the selection rate among tertiary industries. In contrast, Nikkei Telecom is typical in that its users are spread over a wide range.

Table IV-3 shows the top five databases (files) in terms of highest utilization frequency. The top-ranked databases in terms of utilization frequency are in line with the replies listing the most frequently used systems.

**Table IV-3 Databases with High Utilization Frequency (N=457, multiple replies)**

Order	No. of replies	Databases
1	215	JICST File on Science and Technology Document
2	206	Nihon Keizai Shimbun Article File
3	166	Patent/Utility Model
4	144	COSMOS 2
5	117	TSR-BIGS
6	74	WPI
7	63	CA
8	52	Asahi Shimbun News Database
9	50	Nikkei Personnel Data Bank
10	45	Trade Mark
11	42	WHO
11	42	CA-SEARCH
13	40	INPADOC
14	39	CLAIMS
15	38	MEDLINE

Although this survey on the monetary amount of utilization is targeted at business users, the ranking of contracted users of on-line information services (vendors) according to Nikkei New Media (published by Nikkei Business Publications, Inc.) is shown in Table IV-4. This survey is conducted, in January and July, and is conducted independently by the above publication focusing on representative database users in Japan.

Table IV-4 Ranking of On-line Information Service Companies (Vendors) by No. of Contracted Users

(continued on next page)

Supplying Companies and Organizations	Name of Services	Description	No. of passwords		Growth Rate (%)
			As of Mar. 1 1995	As of Jan. 1 1994	
Nihon Keizai Shimbun, Inc.	Nikkei Telecom, NEEDS-IR, NEEDS-TS, NEEDS-BULK, NEXIS, LEXIS, LEXPAT, DJN/R, FT PROFILE, D&B BIR, etc.	On-line supply of news and databases, newspaper and magazine article searching, on-line searching for European and U.S. news article information, on-line searching for U.S. corporate information, etc.	78,656	76,459	2.9
TKC Corp.	LEX/DB, TPS1000, Daikoku Kusu 95, AUDIT1000, PX1, FX2, Corporate Defense DB, MIN/DB, FX Easy, Clinic, etc.	Complete text DB of judicial precedents, ordinances, etc., management indicators, corporate legal affairs, management planning, tax payment planning, etc.	49,810	47,913	4.0
QUICK Corp.	QUICK-10, QUICK Video-1, QUICK-FF, QUICK-21 watch, QUICK Indicator Board	Comprehensive economic information focusing primarily on securities and finance	<sup>1)</sup> 47,000	<sup>1)</sup> 47,000	0.0
G-Search Corp.	G-Search	Newspaper article information, corporate information, magazine and book information, industrial, economic and management information, who's who, international information, government information, scientific and technical information, etc.	<sup>2)</sup> 37,601	<sup>2)</sup> 29,475	27.6
NEC Corp.	C&C-VAN Database	Corporate information, newspaper article information, marketing information, economic information, semiconductor information, etc.	29,800	26,200	13.7
Japan Information Center of Science and Technology	JOIS, JOIS-F, STN-International, NACSIS-IR, etc.	Scientific information, domestic medical literature database, patent information, research subject information, doctoral theses, researcher directory, research abstract database, etc.	15,600	16,400	- 4.9
KINOKUNIYA Co., Ltd.	DIALOG, Data-Star, QUESTEL, NUMERICA, EC Online, WESTLAW, JOIS, ASSIST, DIALINE, G-Search, C&C VAN, Elnet, etc.	Scientific and technical literature information on medicine, chemistry, patents and so forth, business information, corporate information, newspaper article information, newly published foreign book information, etc.	14,630	14,008	4.4
MARUZEN Co., Ltd.	DIALOG, Data-Star, QUESTEL, LEXIS, Legi-Slate, JOIS, DIALINE, G-Search, etc.	Scientific and technical literature information, patent information, business and corporate information, publishing information, newspaper article information, newly published foreign book information, etc.	14,142	13,510	4.7
FUJITSU FACOM INFORMATION PROCESSING Corp.	Comprehensive Database Service, G-Search, etc.	Corporate information, newspaper and news article information, magazine and book information, industrial, economic and management information, who's who, overseas information, etc.	9,240	8,900	3.8
Japan Patent Information Organization (JAPIO)	PATOLIS, PATOLIS-INPADOC	Domestic and overseas (60 countries) patent data	6,352	5,966	6.5

Supplying Companies and Organizations	Name of Services	Description	No. of passwords		Growth Rate (%)
			As of Mar. 1 1995	As of Jan. 1 1994	
TEIKOKU DATABANK, Ltd.	COSMOSNET (COSMOS1, COSMOS, English COSMOS2), CCR	Corporate financial information and profiles, English language corporate information, corporate credit survey reports, corporate income statements	6,252	5,736	9.0
TOHAN Co., Ltd.	SUPER TONETS	Book information, etc.	5,450	4,530	20.3
KK KYODO NEWS SERVICE JAPAN INFORMATION	AP, DJ, Telerate, DJN/R	Financial, stock price and product market information, general article information	4,400	4,300	2.3
PROCESSING SERVICE Co., Ltd. *3)	Infostream (JAPICDOC, medical-related presentation title information, Tomorrow's New Drugs, PHARMCAST, ARIS, KIKAKU NET, MEDX), JIP/AMD, BRS, ORBIT	Pharmaceutical information on drug adverse effects, etc., medical information, drug notification and certification information, standards information, magazine advertising rates, municipal and township data, patent information, etc.	4,100	4,550	- 9.9
TOKYO SHOKO RESEARCH, Ltd.	TSR-BIGS, TSR-FINES, TSR-VAN	Corporate, financial, representative, financial ratio, corporate income statement and bankruptcy information and information on corporations paying large amounts of taxes, etc.	3,988	3,910	2.0
KOKUSAI INFORMATION SERVICE Co., Ltd.	Dow Jones, FT Profile, News NET, One Source, Standard & Poor's, Nikkei Telecom, KISPAT, etc.	Domestic and overseas corporate information, economic information, financial information, medical and scientific information, patent information, etc.	2,680	2,550	5.1
Nichigai Associates, Inc.	NICHIGAI ASSIST	Who's who, personal information, book information, magazine article information, award and prize information	1,830	1,590	15.1
Electronic Library Inc.	ELNET (ELMOR, ELSDI, ELDB, etc.)	Newspaper (50 major domestic newspapers) and magazine (approx. 130 publications) article information, original article image information database	1,800	1,550	16.1
Japan Construction Information Center	JACIC NET	Construction administrative news, public works related information including budgets and ordering, personnel information, construction statistics, technical information on construction materials, methods, etc.	1,398	1,244	12.4
TOYO INFORMATION SYSTEMS Co., Ltd.	BRANDY	Similar product searching (character name searching, graphical trademark searching), trademark watching service, official report fax service	1,218	1,130	7.8
NIPPON SHUPPAN HANBAI Inc.	NOCS	Information searching and ordering of books and magazines published in Japan	400	400	0.0
Chemical Data Service, Inc.	CD-NET	Newspaper information related to the chemical industry, chemical product information, corporate information, statistical information	384	382	0.5
Tokyo Kantei Corp.	Nationwide apartment housing database	Real estate information	*4) 70	*4) 70	0.0
Total for 23 On-line Information Service Companies (Vendors)			336,801	317,773	6.0

\*1) No. of dedicated terminals \*2) Figures as of Jan. 1995 \*3) Includes figures for Usaco following business tie-up

\*4) 2,700 in terms of no. of users

Note: Includes some companies functioning as both producers and vendors

Source: Nikkei Business Publications, Inc. "NIKKEI NEW MEDIA (1995.03.20)."

### 3.2 Categories of Frequently Used Databases

Fig. IV-1 provides a summary of those replies pertaining to the categories of frequently used commercial databases according to whether they are produced in Japan or overseas. In the case of Japanese databases, the top category is newspapers/journals/news (69.1%). This is followed by "Corporate finance/profile" (63.0%), "Patents" (48.2%), and "Who's who/organization information" (43.1%).

On the other hand, the most frequently used categories among foreign databases consist of "Patents" (59.2%), "Corporate finance/profile" (46.0%), "Medicine/pharmaceuticals/biotechnology/biology" (42.8%) and "Newspapers/journals/news" (33.6%). Recently, Japanese databases are used most frequently in the categories related to general information or business, such as "Newspapers/journals/news" and "Who's who/organization information." In addition, interest in patents is also growing. On the other hand, in addition to categories relating to natural science, including "Patents" and "Medicine/pharmaceuticals/biotechnology/biology", among others, for which there was a high level of use in the past, the selection rate for "Corporate finance/profile" is increasing for overseas databases.

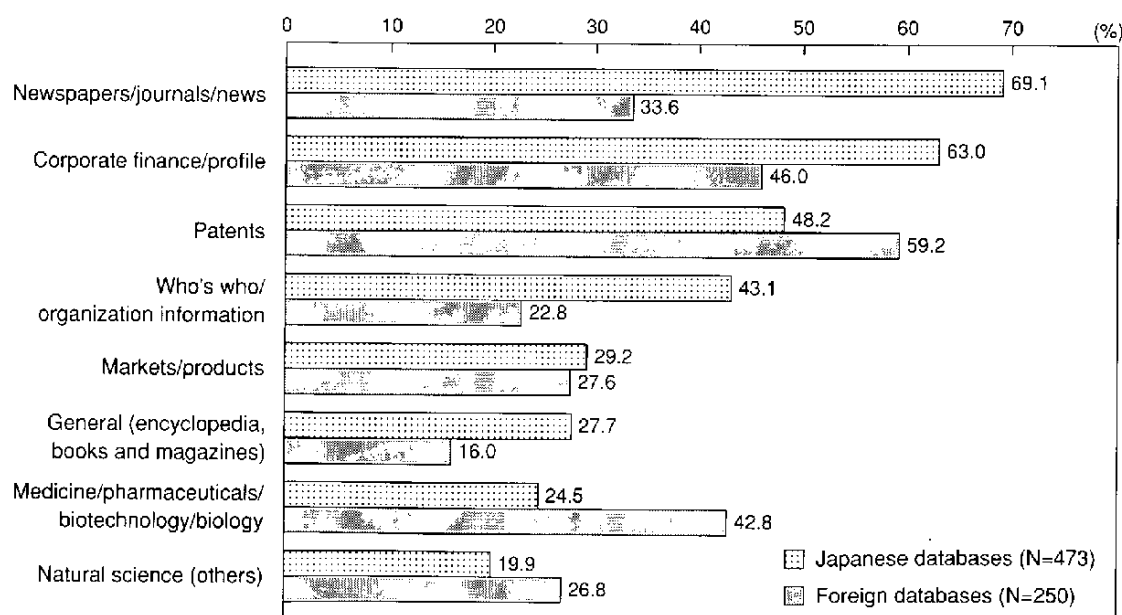


Figure IV-1 Categories of Frequently Used Databases (multiple replies)

### 3.3 Types of Data Used

Table IV-5 indicates those types of data that are currently being used or for which a future increase in usage is desired. This data is shown separately for on-line and off-line utilization. The type of data for which there was the largest number of replies was on-line text (reference) data.

**Table IV-5 Types of Data Currently Being Used or for Which a Future Increase in Usage is Desired (multiple replies)**

	Currently Being Used (N=448)		Usage Desired to be Increased (N=342)	
	On-line (N=439)	Off-line (CD-ROM, etc.) (N=132)	On-line (N=280)	Off-line (CD-ROM, etc.) (N=181)
Text (reference)	376 (85.6)	87 (65.9)	113 (40.4)	76 (42.0)
Text (fact, character)	285 (64.9)	68 (51.5)	108 (38.6)	74 (40.9)
Numerical	127 (28.9)	29 (22.0)	102 (36.4)	48 (26.5)
Image and graphical (graphs, drawings)	33 ( 7.5)	17 (12.9)	114 (40.7)	59 (32.6)
Image (still pictures, photographs)	20 ( 4.6)	29 (22.0)	116 (41.4)	86 (47.5)
Video (animated pictures)	0 ( 0.0)	0 ( 0.0)	35 (12.5)	31 (17.1)
Voice	1 ( 0.2)	1 ( 0.8)	22 ( 7.9)	31 (17.1)

Notes: 1. Reference refers to secondary information such as directories.

2. Figures in parentheses indicate percentages of the total number of replies.

This was followed by on-line text (fact, character) data and numerical data. In addition, although the same order can be seen for off-line use such as by CD-ROM, with respect to image information, there is a higher selection rate for "Images (still pictures, photographs)" than "Image and graphical," perhaps due to the presence of chemical and patent-related data.

With respect to data types desired to be used in the future or for which use is desired to be increased, the selection rate for "Image (still pictures, photographs)" was nearly the same as that for conventional types such as "Text" and "Numerical," indicating a sense of expectation with respect to this type of data. Moreover, the selection rate for "Image (graphs, drawings)" is higher than 30% for on-line service. Although the selection rate for "Video (animated pictures)" is roughly 10% on average overall, use is expected to increase as the introduction of multimedia progresses for business users.

### 3.4 Utilization of Public Data

In this year's survey, companies were asked about their use of databases handling public data (data released by the government and government organizations). Table IV-6 shows those results. Of 358 responding companies, 131 are currently using public data databases. When the data being used is divided into character data and numerical data, numerical data is always found to be used more irrespective of company size or industrial category (111 replies, 84.7%). In particular, "Corporate-related data" had the highest selection rate at 59.5%. This was followed by



**Table IV-6 Utilization of Databases Handling Public Data**

		Currently Using (N=131)	Desire to Use in Future (N=231)
Character Data	Government white papers and related documents	32 (24.4)	117 (50.6)
	Government committee reference materials	16 (12.2)	91 (39.4)
	Government press conference reference materials	12 ( 9.2)	65 (28.1)
	Other	17 (13.0)	9 ( 3.9)
Numerical Data	Population, employment and labor	35 (26.7)	80 (34.6)
	Domestic economy, business climate and finance	44 (33.6)	103 (44.6)
	International trade	29 (22.1)	77 (33.3)
	General business and industry	63 (48.1)	139 (60.2)
	Corporate-related data	78 (59.5)	148 (64.1)
	Other	7 ( 5.3)	8 ( 3.5)

Note: Figures in parentheses indicated the percentage of total number of replies

"General business industry," at 48.1%, and "Domestic economy, business climate and finance," at 33.6%. Character data accounted for 42.0% of the data used, with "Government white papers and related documents" having the highest selection rate at 24.4%. Although the overall selection rate is low, this is mainly due to the small amount of information supplied for use on databases.

Of the 231 replies that indicated "Not currently using but desire to use in the future," there were 206 replies that selected numerical data (89.2%) in contrast with 142 replies that selected character data (61.5%). In looking more closely at these figures, "Corporate-related data" had the highest selection rate, at 64.1%. This was followed by "General business and industry," at 60.2%, and the "Government white paper and related documents" category of character data, at 50.6%.

Although there is an extremely high level of interest in the use of numerical data, there is considerable latent demand for character data as well. In the case of public data, public notice of the existence of that data is not adequate. Since providing committee reference materials, etc., is gradually getting under way through Internet, among other services, a change is likely, with numerical data tending to dominate in the future.

#### 4. On-line/Off-line Utilization

Utilization ratio based on the monetary amount of usage was again asked again in this year's survey by dividing in the manner indicated below (Table IV-7).

- (1) Use of on-line services other than by PC network
- (2) Use of on-line services by PC network network
- (3) Use of off-line services by MT

(4) Use of off-line services by CD-ROM

(5) Use of other off-line services

Overall, although use of (1) accounts for more than 60% of the use of domestic databases and roughly 80% of the use of overseas databases, when compared with the results of the previous survey, these figures are slightly lower. This is believed to be due to an increase in the number of companies switching to use by PC network services of (2). The proportion of off-line services for (3)-(5) combined is only about 10% for both domestic and overseas databases.

Although the PC network services of (2) are not that large in number for both domestic and overseas databases, their use demonstrates an increasing trend as mentioned above.

**Table IV-7 On-line/Off-line Utilization Rates (N=404)**

		1993 Results		1994 Forecast	
		Domestic	Overseas	Domestic	Overseas
On-line (excluding PC network services)		66.7(%)	78.1(%)	65.6(%)	77.8(%)
PC network services		23.9	12.8	24.9	13.5
Off-line	MT	2.4	1.8	1.9	1.3
	CD-ROM	3.5	3.3	4.1	4.0
	Other	3.6	3.3	3.6	3.4

## **5. Issues on Pricing and Utilization**

### **5.1 Pricing Issues**

There were 339 replies from companies expressing dissatisfaction with the price of database information, 68.6% of the overall average. This figure represents an increase of 75.2% compared with the previous survey.

### **5.2 Dissatisfaction with Recorded Information**

In this survey, questions were also asked about any dissatisfaction users have with information recorded in databases. The most common complaint for domestic databases was "Inadequate output forms of searching results," at 41.6%. This was followed by "Low number of information entries," at 40.8%.

In the case of overseas databases, the most frequently mentioned area of dissatisfaction was "Information inaccuracy," indicated in 38.7% of the replies. This was followed by "Inadequate

output form" (36.6%) and "Small amount of useful information" (28.0%). With respect to "Information inaccuracy," the figure was 28.2% for domestic databases. These high selection rates for dissatisfaction with overseas and domestic databases indicate a serious problem with the quality of recorded information.

### **5.3 Problems with Commands, Functions and Operability**

Of 312 respondents, 66.7% indicated "Inconsistent commands" as a problem, the most frequently given response as in previous years. This was followed by "Need for a comprehensive thesaurus" (42.6%) and "Slow search speed" (36.5%). The percentage of respondents selecting "Need for a comprehensive thesaurus" is increasing slightly each year.

## **6. Increased Database Utilization by PC Network Services**

Of the 718 companies replying, 364 (50.7%) indicated that they are using PC network services. Thus, roughly one out of every two companies are using PC network services, representing an increase of five percentage points from the previous survey.

The utilization rate of PC network services is 42.2% for small and medium-sized businesses and 54.6% for large companies. By industrial category, similar to the results of the previous survey, data processing and information service demonstrated the highest utilization rate, at 70.2%. The construction industry follows with 66.7%.

Conversely, although the industrial category demonstrating the lowest utilization rate was "Iron and steel, non-ferrous metal and metal manufacturing industries," at 32.4%, the utilization rate in this category has been increasing each year. The average for tertiary industries as a whole is 55.9%, exceeding the average for the secondary industry (49.0%).

Examples of frequently used PC network services include NIFTY-Serve (83.8%), PC-VAN (23.4%) and Nikkei MIX (4.5%). The concentration of PC network service utilization on NIFTY-Serve has grown recently. This trend is the same when analyzed by either company size or industrial category.

The menu that is used most frequently in PC network services overall is "Database" (56.5%). This is followed by "Electronic mail" (55.9%) and "BBS" (32.0%). When these are considered together, it can be seen that use as a communication tool accounts for the majority of utilization (Table IV-8).

**Table IV-8 Frequency-Used PC Network Service Menus (multiple replies)**

Menu \ Company size	Small/medium (N=53)	Large (N=247)	Total (N=356)
Database	45.3(%)	59.1(%)	56.5(%)
Electronic mail	47.2	56.3	55.9
BBS (electronic bulletin board)	24.5	31.2	32.0
Electronic conferences	20.8	15.0	17.1
Transaction services	5.7	5.2	3.7
Others	15.1	5.7	7.0

## 7. Utilization of Internet

This year Internet has attracted considerable attention, and the number of users is increasing at an explosive pace. In this year's survey, questions were asked pertaining to Internet to determine the extent of its utilization and so forth.

Internet was indicated as currently being used by 102 of the 718 respondents to this question (14.2%). There were also 193 replies (26.9%) indicating that Internet is not being used at present but is desired to be used in the future. Those industrial categories having the highest utilization rates include the "Electrical, general and transport machinery manufacturing industry," at 22.7%, and the "Information processing and information supply industry," at 21.0%. In terms of company size, 5.5% of small and medium-sized businesses and 15.2% of large corporations are using Internet. There is no significant difference between small and medium-sized businesses and large corporations with respect to the ratio of companies desiring to use Internet in the future. However, a slight difference appears with respect to the industrial category. When combined with "No need to use in the future," the replies from the "Finance and insurance industries," "Commerce," and "Iron and steel, non-ferrous metal and metal manufacturing industries" indicated a low level of interest.

With respect to the purpose of Internet utilization (planned), "Electronic mail" was indicated in 101 replies (89.1%) followed by "Electronic news" (61.4%), "Non-commercial database searching" (49.5%) and "File transfer" (45.5%), as shown in Table IV-9. Essentially the same order was observed for the 175 respondents indicating that Internet is desired to be used in the future: "Electronic mail" (70.3%), "Non-commercial database searching" (56.0%), "Electronic news" (38.3%) and "File transfer" (37.7%). In any case, it appears that high expectations are being placed on Internet as a means of communication or means of acquiring information.

**Table IV-9 Purposes of Using Internet**

Purpose	Currently Using (N=101)	Desire to Use in Future (N=175)	Overall (N=276)
Electronic mail	89.1(%)	70.3(%)	77.2(%)
Electronic news	61.4	38.3	46.7
Remote log-in	32.7	16.0	22.1
File transfer	45.5	37.7	40.6
Commercial database searching	16.8	16.0	16.3
Non-commercial database searching	49.5	56.0	53.6
Public release of thesis research results	9.9	14.3	12.7
EDI (Electronic data interchange)	11.9	14.3	13.4
Other	5.9	2.9	4.0

With respect to the merits of Internet utilization, the same replies are observed irrespective of whether it is used or not (Table IV-10). The most common reply given was "Ease of gathering information" followed by "Users can easily become information suppliers" and "Savings on communication costs."

Finally, a question was asked regarding problems with use. "Security" was the main area of concern noted in 62.4% of replies. This was followed by "Lack of clarity about liability when a failure occurs," at 31.1%. When these two are combined, it is clear that the emphasis is on concern centers on the network itself (Table IV-11). These indicated problems were followed by those of "Protection of copyrights," at 26.7%, and "Lack of standardization of information," at 23.9%.

**Table IV-10 Merits of Internet**

Merits	Currently Using (N=98)	Desire to Use in Future (N=179)	Overall (N=277)
Data downloading	28.6(%)	24.0(%)	25.6(%)
Savings on communication costs	41.8	36.9	38.6
Ease of gathering information	80.6	76.0	77.6
Simple processing of acquired information	26.5	17.9	20.9
Users can easily become information suppliers	44.9	36.3	39.4
Other	5.1	6.7	6.1

**Table IV-11 Problems Concerning Internet Utilization**

Problems	Small and Medium-Sized Businesses (N=85)	Large Corporations (N=341)	Overall (N=524)
Security	49.4(%)	64.5(%)	62.4(%)
Protection of copyrights	23.5	26.1	26.7
Lack of standardization of information	25.9	24.0	23.9
Low information reliability	14.1	13.8	12.6
No comprehensive index system	25.9	15.2	18.5
No comprehensive directory	21.2	13.2	15.1
Lack of clarity about liability when a failure occurs	24.7	33.4	31.1
Other	21.2	16.4	16.8

## **8. Questions Relating to CD-ROM**

### **8.1 Utilization of Information on CD-ROM**

Of the 717 companies responding, 152 (21.2%) replied that they currently use commercial information on CD-ROM (such as databases, etc.). This percentage corresponds to an increase of 1.3 percentage points from the previous survey. By industrial category, the "Oil and chemical industry" had the highest utilization rate at 37.0%. "Public services" also demonstrated a high rate, at 28.7%, including educational institutions, libraries, etc.

In addition, regardless of whether or not CD-ROM is used at present, companies indicating that they planned to use CD-ROM in the future totaled 262 (47.5%) of 552 companies responding. By industrial category, 58.0% of those companies in the "Oil and chemical industries," which demonstrated the highest rate for current utilization, plan to use CD-ROM in the future, followed by the "Information processing and information supply industries," at 56.0%.

### **8.2 Categories of Information Use**

With respect to those categories of information available on CD-ROM currently being used, "Science, technology and patents" was selected in far more replies than other categories, being selected in 64 of 146 replies (43.8%). This was followed by "Magazine, book and publication information," at 23.3%.

### 8.3 Currently Used CD-ROM Software

Table IV-12 lists CD-ROM software currently being used. Among the 113 companies replying 48, or 42.5% used the software for "Unexamined patent applications." Next, "Unexamined utility model applications" was mentioned in 42 replies, or 37.2% of the total.

**Table IV-12 Currently Used CD-ROM Software (N=113, multiple replies)**

Order	No. of Replies	CD-ROM Software
1	48	Unexamined Patent Applications
2	42	Unexamined Utility Model Applications
3	30	KOJIEN
4	24	MEDLINE
5	23	J-BISC
6	17	Scientific and technical journal general catalog
7	16	CD-HIASK
8	10	Current Contents
9	9	Medical Central Magazine
10	7	Legal Base
10	7	Legal precedent literature information CD-ROM





## **V State of Personal and Home Utilization**

### **1. Introduction**

DPC conducted a survey on the state of personal and home database utilization in 1990 and reported those findings in section III.2 Database Utilization in Daily Life of "Database in Japan 1991." Following this initial survey, additional surveys were conducted on two occasions (February and November) in 1994. The survey method was the same as that employed in the previous survey, namely obtaining replies to a questionnaire by Electronic Billboard focusing on users of the major PC network service, NIFTY-Serve.

### **2. Summary of Survey Results**

There are several major differences between the results of the recent survey and those of the previous survey conducted in 1990.

To begin with, replies were received from 2,327 users in the February survey, and from 2,584 persons in the November survey, far exceeding the number of the previous survey of 1,326 persons. In particular, the proportion of women replying in the February survey was 12.2% and 13.0% in the November survey, exceeding that of the previous survey (6.5%). Users of PC network services and those interested in databases is therefore covering a much broader spectrum.

The percentage of persons with experience using databases in the February and November surveys decreased. In the previous survey, there were 891 persons (67.2% of the total number of replying users) who had experience using commercial databases through PC network services. In contrast, in the recent surveys, 63.4% and 59.6%, respectively, of persons responding indicated that they had experience using commercial databases including services other than PC network services. This is thought to reflect the fact that although the number of PC users is increasing rapidly, the increase in the number of database users is not keeping up with that increase. In these recent surveys, however, it was clear that nearly all the respondents desired to use commercial databases even as individuals if certain conditions were satisfied. The biggest obstacle given was the high usage fees of commercial databases.

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### **3. Database Utilization by PC Network Services**

#### **3.1 Increase in Use at the Personal Level**

In the February survey, although the number of persons with experience using commercial databases, including that other than through PC network services, totaled 1,476 out of 2,327 respondents, corresponding to 63.4%, 1,337 of these persons, or more than 90%, had experience using commercial databases through PC network services.

These 1,337 persons were then asked the purpose of that use choosing from among "for work only," "mainly for work but also personal use," "both work and personal use roughly equally," "mainly for personal use but for work also" and "for personal use only." As a result, the number of respondents who indicated that the purpose of their commercial database use by PC network services was work only totaled 15.6%; mainly work, 28.9%; work and personal use roughly equally, 7.3%; mainly personal use, 21.4%; and personal use, 26.8%. This indicates that use oriented toward individuals is approaching 50%. In the previous survey, the replies to the same question were: work, 46.7%; hobby, 30.0%; shopping and seat reservations, 8.5%; and moneymaking, 3.6%. Although a direct comparison cannot be made since the choices offered were different, if hobby, shopping and seat reservations, and money-making are considered to represent personal use, the proportion of people using databases for purposes other than work is increasing steadily.

#### **3.2 Home Use Surpasses 60% for the Place of Use**

Replies given in response to the place where commercial databases are used by PC network services were as in the home, at 63.0%; place of work, at 35.5%; and public facilities, 1.1%. Compared with the results of the previous survey (56.5%, 43.0% and 0.2%, respectively), there has been a significant increase in use in the home. Although use at public facilities such as libraries has also increased over the previous survey, there were only 15 such persons. At present, 90.3% of students are using commercial databases in their homes, thus indicating a need to provide better facilities and systems that promote database utilization at public facilities such as libraries and schools.

#### **3.3 Fees Borne by User Even at Work**

Those respondents using databases less than 30 minutes per week accounted for 68.1% of the total. The number of users then dropped off rapidly as the duration of utilization time increased, with utilization time of between 30 minutes and one hour accounting for 14.4%, one hour to three hours, 3.6%, and three hours or more, 0.8%. In addition, the average monthly usage fee was less

than ¥1,000 for 55.7% of the respondents, and the weighted average was ¥2,630. Those persons using commercial databases roughly equally between personal use and work had the highest usage fee at ¥3,780, followed by persons using mainly for work (¥3,560), for work only (¥3,410), mainly for personal use (¥1,930) and personal use only (¥1,360). Thus, a large difference in usage fees was observed between use at work and personal use.

The percentage of respondents whose usage fees are borne nearly entirely by the company was 22.7%, while the percentage of respondents whose usage fees are borne nearly entirely by the individual was 66.1%. When this is examined according to purpose of use, 23.1% are using databases for work only; 43.7%, mainly for work; and 63.3%, using equally for work and personal use responded that fees are borne nearly entirely by the individual. This suggests that there is a large number of people who, despite using databases at work, are paying for that use out of their own pockets.

Perhaps as a result of this, an overwhelmingly large proportion of the respondents (80.1%) felt that commercial database usage fees are excessively high. Among those persons indicating dissatisfaction with commercial databases, 67.8% listed the usage fee system as the reason for that dissatisfaction.

#### **4. Trends of Personal Utilization**

In the November survey, 1,541 of the 2,584 respondents, or 59.6%, had experience in using commercial databases, including those for use other than by PC network services.

When respondents were asked to select the purpose for which they use commercial databases from among five choices similar to those used in the February survey, work use only accounted for 22.9%; mainly used for work, 29.5%; used equally for work and personal use, 5.9%; mainly for personal use, 14.7%; and personal use only, 27.0%, thus indicating somewhat of a decrease in personal use.

##### **4.1 High Expectations Placed on CD-ROM**

With the exception of those persons who replied for work use only, 1,188 persons have experience in using commercial databases for personal use. Those persons were asked to list up to three types of media they use when using databases and indicated that PC network services accounted for an overwhelmingly large proportion, at 92.6%. With respect to media other than PC network services, direct access to on-line databases accounted for 16.9%; CD-ROM, 11.3%; electronic books, 7.3%; and magnetic tape and floppy disks, 3.4%.

However, when all respondents were asked to similarly list three types of media when using commercial databases in the future, although there was no change in the top ranking of PC network services (90.8%), the second and third place rankings were reversed, with CD-ROM

accounting for 26.1% followed by direct access to on-line databases accounting for 24.8%. Due to the release of personal computers containing internal CD-ROM drives and the appearance of CD-ROM software in a wide range of categories, an environment conducive to the proliferation of CD-ROM is being established in terms of both hardware and software. Thus, CD-ROM are considered to be a promising media for commercial databases, and users are seeking a larger number of databases available by CD-ROM.

#### 4.2 Articles, Corporate and Book Information Comprise Top Three

The 1,188 respondents who have used commercial databases as individuals were asked to select three categories from among 18 for which they frequently used databases. As shown in Fig. V-1, the top three categories are article searching, book information and corporate information. With respect to those categories frequently used for article searching, those respondents who listed corporate and industrial information accounted for 31.2% of the total. This was followed by social and domestic-related information, at 30.8%, and natural science and technology, at 22.5%. By occupation, there were many general employees and professionals who use corporate and industrial information, while the majority of students, public servants, teachers, part-timers and housewives use social and domestic-related information. In addition, there was a high rate of utilization of both corporate and industrial information and social and domestic-related information among the self-employed.

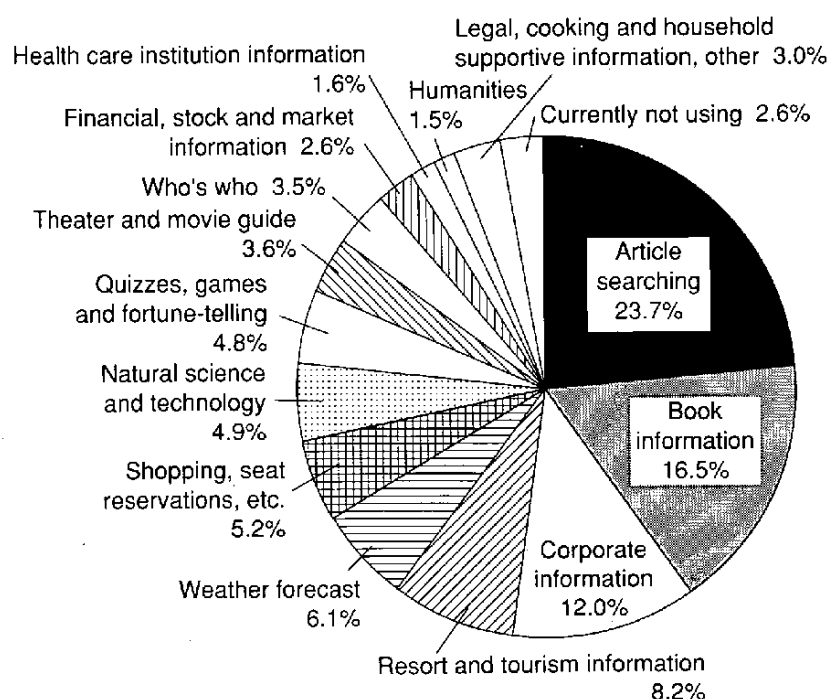


Figure V-1 Categories of Frequency Used Databases (Total no. of Replies: 2,425)

With respect to the types of corporate information frequently used, corporate profiles accounted for 31.8% of the total; corporate trends, 13.0%; and corporate new product information, 12.3%. Moreover, the most frequently used types of book information consisted of the new publication guides, at 34.8%; bibliographies, at 19.7%; and technical journal information, at 18.7%.

In addition, respondents were asked to list three commercial databases that can be used in Japan that they use most frequently. The 10 most frequently used databases are listed in Table V-1. All the most popular databases can be accessed from NIFTY-Serve by a gateway, etc.

When the databases used were divided between domestic and overseas databases, the number of domestic databases was overwhelmingly larger. Those persons who only use domestic databases accounted for 78.0% of the total, while those persons who have used an overseas database account for 13.2% even when the 10.4% of the respondents who mainly use domestic databases are included.

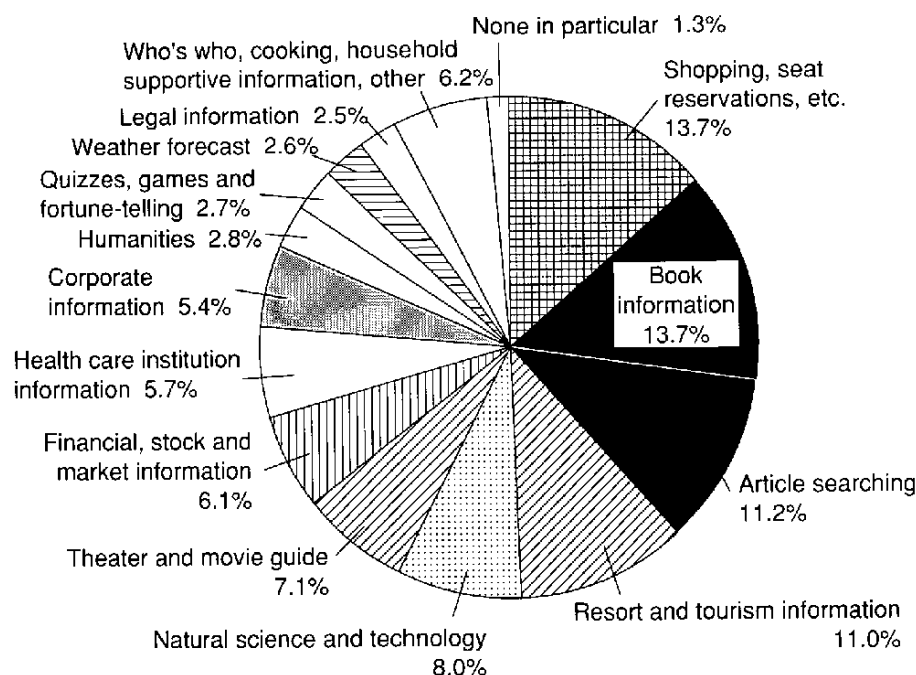
**Table V-1 Frequently Used Databases (multiple replies)**

(1) Asahi Shimbun News Database	400	33.7%
(2) Nikkei Shimbun News Database	229	19.3%
(3) Nichigai Assist	208	17.5%
(4) Tokyo Shoko Research	154	13.0%
(5) Yomiuri Shimbun News Database	150	12.6%
(6) Mainichi Shimbun News Database	140	11.8%
(7) Other newspaper article files	113	9.5%
(8) COSMOS	112	9.4%
(9) Nikkei Who's Who	68	5.7%
(10) JICST File	36	3.0%

### 4.3 High Demand for Shopping and Leisure Information

What types of databases are considered necessary to promote commercial databases at the personal level? The respondents of the current survey were asked to list the three categories of databases that they would like to use in the future. The results are shown in Fig. V-2. There are considerable differences when compared with the findings in Fig. V-1.

Corporate information has dropped from the top rank, while article searching is ranked third, at 11.2%. A reason for this may be that even though databases are used by individuals at present, there are many aspects that satisfy work needs. This may also be the result of omitting newspaper



**Figure V-2 Categories Desired to be Used (Total no. of Replies: 6,229)**

articles and corporate information from the choices since newspaper articles and corporate information have ample content and are frequently used at present. On the other hand, the number of users for shopping and seat reservations, resort and tourism information, and so forth, for which there is a strong desire for use in the future, currently accounts for less than 10% of the total. Although there is a considerable need for this information at the personal level, there is little of this information that can be utilized in the form of a database. The degree to which this information can be provided in the future will be a major key to ensuring the proliferation of databases.

#### **4.4 Fee System Generates the Greatest Dissatisfaction**

What are some areas of dissatisfaction users have with respect to commercial databases?

To begin with, in a multiple reply (maximum three) question asked of the 1,188 persons having used commercial databases at the personal level, dissatisfaction with the usage fee system was listed by 70.1% of the respondents, high line usage fees, by 51.9%; more search methods, by 33.8%; greater detail of database contents, by 19.9%; and faster communication speed, by 18.4%. Dissatisfaction with usage fees was indicated by the most respondents irrespective of occupation.

On the other hand, among 353 persons that use commercial databases for work only, reasons for not using commercial databases at the personal level included high usage fees (66.6%), no need for personal use at present (37.7%), high line usage fees (16.1%) and required data not available (10.5%). Also, 4.2% of the respondents who desired to use commercial databases at the

personal level have no personal computer in their home.

In addition, although there were 1,043 persons who never used a commercial database, the main reasons for this included high usage fees (47.1%), no need to use (41.6%), do not know which database service is optimal to use (36.3%) and high line usage fees (20.9%).

In any case, with the exception of those persons who indicated that there was no need, those persons who have the desire to use commercial databases but believe there is no possibility of using one in the future accounted for only 2.0% of those persons using commercial databases for work only, and only 2.8% of those persons who have no experience in using commercial databases.

Some conditions for their use of commercial databases included lowering usage fees, better automated searching methods, more databases in categories desired to be used, and lower prices of required equipment.

## **5. State of Utilization of Internet**

The state of utilization of the currently popular Internet was investigated in the November survey. Of 2,584 respondents, 679 (26.3%), replied that they had used Internet. This figure climbed to 1,591 persons (61.6%) when asked if they desired to use Internet in the future. Students made up the highest percentage (37.1%), followed by technical-based company employees (29.2%), professionals (29.2%) and teachers (26.0%). This is considered to be due to the lack of establishment of an environment that allows free access by general corporations and individuals as a result of Internet having developed as a network for research and educational purposes.

When persons having used Internet as well as those desiring to use Internet were asked about the purpose of that use, 8.3% replied that the use was for work only; 24.4%, mainly for work; 14.7%, both for work and individual use roughly equally; 22.8%, mainly for personal use; and 29.9%, for personal use only. This indicates that, in comparison with commercial databases, the purpose of use focuses primarily on personal use.

Connection to Internet is most commonly made from a PC network service (65.6%). This method was followed by commercial network services (20.9%) and non-commercial network services (13.5%).

The most popular services among Internet users and those persons desiring to use Internet consisted, in order, of electronic mail (64.8%), TELNET (39.9%), Net news (35.2%), commercial databases (23.7%), file transfer (17.0%) and searching for theses and other research results (12.9%).

The most common merit of using Internet was given as enabling the gathering of information on a global scale (71.5%). Other merits included communication with persons overseas (40.4%), savings on communication costs (25.3%) and being able to easily become an information supplier

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(18.3%).

Conversely, the most common area of dissatisfaction with Internet was difficulty of operation. This was followed by problems with security, lack of a comprehensive index method, lack of clarity about liability during a failure, lack of standardization of information and concerns over protection of copyrights.



## **VI Informatization of Japan and the Role of the Administration**

### **1. Promotion of an Advanced Information and Telecommunications Society**

The year 1995 may merit special mention in the history of informatization of Japan. This is because, in accommodation of the U.S. National Information Infrastructure project (NII), the government of Japan established the Advanced Information and Telecommunications Society Promotion Headquarters in 1994. Although the objective of this project is informatization throughout Japan, a five-year plan for informatization of the administrative sector was started in 1995 to serve as a trigger for the promotion of attaining that objective.

The government of Japan established the Advanced Information and Telecommunications Society Promotion Headquarters by Cabinet decision in August 1994. This headquarters is composed of government ministers, with the Prime Ministers serving as the chairman and the Ministers of MITI and MPT serving as the vice-chairmans. The objective is to summarize basic concepts regarding informatization throughout Japan and provide the necessary communications base. This headquarters followed in line with the proposal for consolidation of social infrastructure made by the Economic Reform Research Group (Hiraiwa Research Group) in December 1993. This headquarters held meetings with experts and a report of their findings was submitted at the end of 1994. According to the contents of that report, various targets were set including (1) realization of the Japanese version of an Information Superhighway Project connecting the entire country by optical fibers by the year 2010, (2) the drafting and implementation of medium- and long-term projects by the administration for informatization over a wide range of fields, (3) promotion of informatization in fields including education and health care, and (4) a review of the current fee system and regulations. (The construction of an information communications infrastructure is currently the subject of worldwide interest. A discussion of "GII: Global Information Infrastructure" is expected to be taken up at the G7 meetings.)

### **2. Expectations on the Administration for Informatization**

The basic policy of the Advanced Information and Telecommunications Society Promotion Headquarters was compiled in February 1995 in the form of a report describing the findings obtained in meetings with experts. In that report, informatization of the administrative sector was expected to serve as the trigger for promoting informatization throughout the entire country. According to this basic policy, the construction of a highly advanced information society was to be led by the private sector, while the government would be required to implement support

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policies in the form of low-interest and interest-free loans. To achieve this goal, importance was placed on the establishment of medium- and long-term projects by the administration with respect to informatization of public fields. In other words, to proceed with informatization on a nationwide scale, it would be necessary to induce private investment, and to achieve this, efforts should be made to first form an informatization construction project of the public sector and then steadily proceed with its implementation.

It has been pointed out that informatization of the administrative sector is lagging behind that of the private sector. Although the administrative sector is proceeding with informatization of large-scale job processing, various small-scale jobs are being passed by without attempting to implement informatization. In addition, due to bureaucratic and budgetary considerations, even if informatization is implemented in individual divisions, the development and proliferation of informatization throughout the entire organization is inadequate. This is due to the fact that adequate investments are not being made in informatization of divisions that activate and enhance the organizational strength of the administrative sector. In other words, there were many aspects of previous investments in informatization in the administrative sector that emphasized greater efficiency of job processing. However, there has been a growing awareness in recent years that investment in informatization for the entire administrative framework is essential in raising the quality of administration in view of the coming of a computerized society.

Under government policy thus far, investments for society have been given precedence, while investments within the administrative sector have been given low priority. Moreover, aspects of investment in the administrative sector make it difficult to evaluate economic effects compared with the private sector. Consequently, it has not been easy to secure a budget for informatization of the administrative sector. However, the concept of conventional public investment emphasizing aspects of civil engineering projects, including roads and public facilities, as ways of enhancing social capital is beginning to be reconsidered, while the importance of an information base in the form of a new social infrastructure is being recognized as a type of social capital for future emphasis. As such, concrete steps are steadily being taken toward investment in informatization for the administrative sector.

### **3. Administrative Informatization**

In the final report of the third Ad Hoc Council for Promotion of Administrative Reform of October 1993, a request was made to the government for the "Creation of a informatization promotion plan for the entire government to promote informatization of the administrative sector based on a medium-range outlook." In response to this request, in so-called medium-range reform guidelines entitled, "Promotion Policies for Administrative Reform in the Future" implemented as a result of a cabinet decision in February 1994, the government decided to enact a promotion plan for implementing medium-range and systematic informatization of the

administrative sector. "Procedures for Creation of an Administrative Level Informatization Projection Plan" (tentative name) were then determined in Inter-ministerial Council of Administrative Information Systems. This council was composed of the chief secretaries of each government ministry and agency in March 1994. This was followed by determination of "Systematic Promotion of Administrative Informatization" by the above council in July that resulted in enactment of the five-year "Administrative Informatization Promotion Plan" that got started in 1995. This project is composed of a "Basic Plan" for the entire administrative sector, and "Action Programmes of Individual Ministry" to be implemented by each government ministry and agency.

The "Basic Plan for Promoting Administrative Informatization" was enacted throughout the government within "Current Promotion Policies for Administrative Reform" approved by Cabinet decision in December 1994. Individual ministry and agency projects were enacted first by seven ministries and agencies by the end of 1994, and then by the remaining ministries and agencies in the first part of 1995. (The above-mentioned seven ministries and agencies consisted of the National Police Agency, Management and Coordination Agency, Economic Planning Agency, Environment Agency, Ministry of Health and Welfare, Ministry of International Trade and Industry, and Ministry of Posts and Telecommunications.) A portion of the projects are expected to be realized as a part of budgetary requests for the 1995 fiscal year.

#### **4. Far-Reaching Effects of Realization of a Computerized Society**

As was previously mentioned, the progress of informatization of the administration sector is expected to serve as a primer for promoting informatization of the entire country. Ideally, the entire society should receive the benefits of informatization equally. Until now, information has been obtained from society and has been supplied to society. However, there is little movement of information from the administration to society. In what movement there is, detailed data required by society is usually not included. Thus, in the past, instead of promoting the development of a computerized society, it can be said that the administrative sector has been a hindrance.

The administrative sector has information, but the general rules regarding the release of that information has not always been clear. A system for public release has not been established. With Japan moving toward the realization of a computerized society, administrative informatization plan are attempting to be promoted so that reform of administrative systems must be performed through informatization to elevate the quality of administration and make qualitative improvements in domestic services. Although general rules concerning public release of administrative information may not be clearly disclosed within those projects, as the movement toward relaxed controls of recent years becomes more established, clarification of general rules for release of information to society will be made in the near future.

Nearly all administrative information thus far has been supplied on paper. It was therefore

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necessary to enter data onto electronic media during the course of analysis and processing of that data. This was a bottleneck to use at the private level. Administrative informatization projects attempt to make all administrative clerical processing paperless, leading to a solution of the bottleneck problem. Generated information in the form of applications, notifications, and so forth, is converted into electronic media, which is then filed and accumulated in a server. Later processing is performed sequentially for the server data. In other words, individual clerical processing consists of accessing information to the server and storing those results in the server. This server is also accessed when a person other than the clerical supervisor directly uses that information.

In general, the structure of data at the time information is generated and the structure of data at the time information is used are frequently different. At the time of accepting and screening applications, for example, data is handled piece by piece. However, when later using that data to determine the status of a given application or to determine a trend, for example, the data must be handled as a unit. As a result of servers being able to share data, supervisors having different utilization needs are able to access their respective servers independently. This effect is realized not only in the relevant clerical supervising sectors, but also in other administrative sectors, while similar effects are also brought about during use in the private sector. When the job supervising sectors then sequentially release fresh processed data, the utilization of that data is promoted in the administrative sector, thus enabling it to be actively used in the evaluation of policies and project planning. Moreover, the aggressive release of information to the private sector promotes consumption of information throughout society, which then leads to the production of new information.

The utilization value of administrative information that encompasses various aspects of society is high not only within the administrative sector but in the private sector as well. During the course of that utilization, further added value can be extracted. The advanced use of information by a country contributes to sophistication of decision-making and agreement formation in the administrative sector, thus leading to the expectations of radical reform of opaque discussions and decisions that lack foresight. Moreover, software packages of the technology and expertise developed and utilized during the course of the advanced use of information by the administrative sector is actively used in decision-making and agreement formation in corporations and regional society, leading to expectations of use as a new tool of a computerized society.

## Appendix

Table 1 Japanese Databases Accessible Overseas (1995:Producers)

Subject ①:Science and Technology Language J:Japanese Vendor Status P:Producer Medium O:Online  
 ②:Economics, Business E:English D:Distributor M:Magnetic Tape  
 and Finance O:Others A:Agent or Floppy Disk  
 ③:General or Others T:Telecommunication C:CD-ROM/CD-I  
 Carriers

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
ADVANSIS, Inc. (AVS)	ACSISS-E	Online daily POS database of home appliances and durable consumers' goods obtained from 2,000 retailers in Japan	②	J	P/D	O/M	U.S.A., Germany, France, Holland, U.K., Singapore, China
	C-Dis	Sales information of consumers' electronic/ electric appliances in China market, obtained from retailer panels, in major cities such as Beijing, Shanghai, Guangzhou, etc.	②	J/E	P/D	M	China, Hong Kong, Holland, France, U.S.A.
	INTELECT	Sales information of home appliances and durable consumer goods obtained in U.S.A., Canada, and Mexico	②	E	P/D	M	U.S.A., Germany, France, Holland, U.K., Hong Kong, Singapore, China
Asahi Shimbun	AERA Article Database	Articles from weekly journal AERA	③	J	P	O/M/C	U.S.A., Europe, Asia
	Asahi News Service (ANS)	Articles from 'Asahi Evening News'	③	E	P	O/M/C	
	HIASK	Articles from Asahi Shimbun (Morning and Evening Editions) of 18 districts	③	J	P	O/M/C	
AXESS INTERNATIONAL NETWORK INC. (AXESS)	DRS	Collection of 50,000 records on tours such as numbers of tourists to and from each country, weathers, hotels, cities and towns	③	J	P	O	U.S.A., Europe, Asia
C. Industrial Research Institute	Computer Industry in Japan		②	J/E	P/D	M	U.S.A.
	Computer Industry Index	Directory of 20,000 companies and institutions in 12 areas related to computer industry, provided with 5 to 10 data elements	②	J	P/D	M	
	Japan Software Company Directory	Description of Japanese information processing and software development companies, provided with 30 data elements	②	J/E	P/D	M	

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
C. Industrial Research Institute	Software Company in Japan		②	J/E	P/D	M	
CHEMICAL DATA SERVICE INCORPORATED (CDS)	CD-NET	Integrated information on chemical industry in Japan	①/②/③	E	P/D	O	U.S.A., E.U.
	Guide to Current ENCS Listed Chemicals	Guide for retrieving the ENCS listed chemicals	②	E	P/D	M	
	JCD-NET	Integrated information on chemical industry in Japan	①/②/③	J	P/D	O	
COMLINE Business Data, Inc. (COMLINE)	CDN	News on Japanese companies in seven major industries	②	E	P	O/M	U.S.A., Europe
	PHARMA JAPAN	News on the Japanese drug industry	②	E	P	O	
	TFW	Information on Japanese finance and economy	②	E	P	O/M	
D & B Information Services Japan K.K. (DBIS)	DUNSACCESS	Provide Japanese companies' information on the worldwide standard	②	E	P/D	O/M/C	Worldwide
	DUNSPRINT	Credit information on Japanese companies including financial, historical, and other descriptive data	②	E	P/D	O/M/C	
Database Promotion Center, Japan (DPC)	Database Directory	Electronic version of the 'Database Directory' compiled by MITI	③	J	P	M	
Dataquest Japan K.K. (DQJ)	DQ MONDAY	Price and market trends for semiconductors worldwide	②	E	P/D	O	U.S.A.
EDUCA Inc. (EDUCA)	Japanese Language Thesaurus	Dictionary of basic vocabularies in Japanese and English with examples	③	J/E	P	M	U.S.A.
Electronic Devices Information Service Co., Ltd. (ELISNET)	ELISNET	Various information on electronic devices, especially semiconductors	①	J	P/D	O/M/C	
ELECTRONIC LIBRARY Inc. (EL)	ELNET	Articles, with full-text image data, of 50 Japanese major newspapers and 150 Japanese journals including monthly economic reports	③	J	P/D	O	U.S.A., Europe, South-East Asia, China
IBJ-NIKKO INFORMATION SYSTEMS, LTD. (INIS)	I.N. Bond Database	Information on domestic public issues by Japanese resident corporations	②	E	P	O	U.S.A., Europe
	I.N. Economic Statistics Database	Information on statistics of economy, industry, and monetary	②	E	P	O	
Japan Association for International Chemical Information (JAICI)	Chem-J	Bibliographies of chemical literatures published by Japanese chemical societies	①	E	P/D	M	
	NQRS	Numerical data of Nuclear Quadrupole Resonance Spectrum (NQRS)	①	E	P/D	M	Europe

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
Japan Audit Bureau of Circulations (JABC)	ABC Data Online Service	Circulation data of Japanese newspapers and journals	③	J	P/D	O/M	
JAPAN CENTER FOR INTERCULTURAL COMMUNICATIONS (JCIC)/Japan Information Network (JIN)	ECONOMIC REPORTS	Financial reports issued by government related banks	②	E	P/D	O	U.S.A., Canada, U.K., France, Germany, Denmark, Holland, Belgium, Austria, Korea, Hong Kong, Thailand, Malaysia, Philippine, Singapore
	FACTS OF JAPAN	Various kinds of statistical data	②	E	P/D	O	
	FOREIGN AID	Statistics of overseas development activities by Japan including ODA	②	E	P/D	O	
	GOVERNMENT AND ELECTION SYSTEM	Description of activities of the Japanese government agencies, as well as the election systems and history	③	E	P/D	O	
	GOVERNMENT TEXT	Policy related announcement by Japanese government in English	③	E	P/D	O	
	INDEX OF GOVT. & ORGANIZATIONS PUBLICATIONS	Bibliographic information and contents of publications for overseas publicity issued by government and related organizations	③	E	P/D	O	
	ORGANIZATIONS FOR INTERNATIONAL COMMUNICATIONS	Description of activities of the Japanese organizations related to overseas publicity and international exchange	③	E	P/D	O	
	PREFECTURES	General description of forty seven Japanese prefectures	③	E	P/D	O	
	PUBLIC OPINION POLL	Public opinion poll from the Prime Minister's Office	③	E	P/D	O	
Japan External Trade Organization (JETRO)	Governmental Procurement	Governmental Procurement on Official Gazette	③	J/E	P	M	Worldwide
	Import Procedure by Commodity in Japan		②	E	P	M	
	Japan Trade Directory		②	E	P	M	
	JETRO Publications in English		②	E	P	M	
	JETRO Quest		②	E	P	M	
	Market Approach to Japan		②	E	P	M	
	Market Trends in Japan		②	E	P	M	
	Potential Importers		②	E	P	M	
	Trade Fairs in Japan		②	E	P	M	

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
Japan External Trade Organization (JETRO)	Your Market in Japan		②	E	P	M	Worldwide
Japan Patent Information Organization (JPIO)	Design	Bibliographic information of registered design in Japan since 1965	①	J	P/D	O	Korea, Taiwan, Germany, France, U.S.A. and others
	Japan Patent	Bibliographic information of registered design in Japan since 1965	①	J	P/D	O	
	Japio	Bibliographic information and abstracts in English of Japanese unexamined patent applications from 1976	①	E	P	M	U.S.A., France
	JPIO-INPADOC	Bibliographic information on patents published by 54 countries and 3 international organizations since 1968.	①	E/O	D	O	Korea, Taiwan, Germany, France, U.S.A. and others
	PAJ/CD-ROM	Bibliographic Information & abstracts with one main drawing in English of Japanese unexamined patent application of which the applicants are Japanese issued by IPC for publication 1976-1993 & numerical order for publication after 1994	①	E	P/D	C	U.S.A., Europe, Asia
	Published Patent English Abstracts Data	Bibliographic information with abstracts of published patents in Japan	①	E	P	M	U.S.A., France
	Trademark	Bibliographic information with graphic figures of published, public, or applied trademarks in Japan since 1964	①	J	P/D	O	Korea, Taiwan, Germany, France, U.S.A. and others
	Utility Model	Bibliographic information with some abstracts and drawings of published or public utility models in Japan since 1960	①	J	P/D	O	
Keizai Bunken Kenkyukai	JOINT	Bibliographic Information of magazine articles on economic and industry	②	J	P	O	U.S.A., U.K., Singapore and others
Marketing Intelligence Corporation (MiC)	JOTI	Data on Japanese travelers abroad	②	J/E	P	M	U.S.A., U.K.
	SDI Annual Report	Sales trend data of pharmaceuticals	②	J/E	P	M	
MARUZEN CO., LTD.	MI-PARTNER	Bibliographic information on Japanese books	③	J	P/D	O	U.S.A.
Media Research Center, Inc. (MRC)	MEDIA DATA JAPAN, MAGAZINE EDITION	Advertising rates and data of consumer and business magazines	③	J	P/D		
	MEDIA JAPAN, NEWSPAPER EDITION	Advertising rates and data of consumer and business newspapers	③	J	P/D		



Company	Database	Description	Subject	Language	Status	Medium	Main Countries
Media Research Center, Inc. (MRC)	SERIALS JAPAN	Data of serials (magazines, newspapers and others) published in Japan. The first half edition of 1995 has 19,843 titles, publishers' data, subscription rates, distributors, advertising rates and contents. Software by DATAWARE TECHNOLOGIES. Equivalent in ISO 9660 and HIS (multi-operating system)	③	J	P/D		
METRO Inc.	FAMILIS	Personal names, addresses, telephone numbers, ages, etc. extracted from various directories and survey data	③	J	P	M	U.S.A., Canada
National Diet Library (NDL)	JAPAN/MARC	Machine-readable catalog of books and periodicals published in Japan	③	J	P/D	M	U.S.A., Canada
	JAPAN/MARC on Disc (J-BISC)	Machine-readable catalog of books and periodicals published in Japan	③	J	P	C	
	NDL CD-ROM LINE Japanese Periodicals Index	Bibliographic Information of articles in Japanese periodicals	③	J	P	C	
New Glass Forum (NGF)	International Glass Database	Fact data on the relation between formations and properties of glass	①	E	P	C	
NHK JOHO NETWORK INC. (NHK-JN)	JAPAN BUSINESS TODAY	Japanese business related news texts and various data on Japanese major companies	②	E	P	C	U.S.A.
Nichigai Associates, Inc.	NICHIGAI ASSIST BOOK	Contents information of books published after 1986 (40,000 books per year), provide outlines of novels	③	J	P/D	O/M/C	
	NICHIGAI ASSIST BOOK/MONTHLY	Monthly version of 'BOOK' database	③	J	P/D	O	
	NICHIGAI ASSIST MAGAZINE	Index to articles, since 1981, of 1,300 journals in business and economics	③	J	P/D	O/M/C	
	NICHIGAI ASSIST PRIZE	Information on 2,000 Japanese prizes in various areas, with 200,000 prize-winners' data	③	J	P/D	O/M	
	NICHIGAI ASSIST WHO	Biographical information of 360,000 writers in Japan, with bibliographic information of their publications	③	J	P/D	O/M/C	
Nihon Keizai Shimbun, Inc. (NIKKEI)	China Economic Databank	Major economic statistical data from mainland China	③	J/E	P/D	O	U.S.A., U.K., Germany, France, Switzerland, Italy, Canada, Hong Kong, Singapore, Korea
	Commodity Market Data	Price data and demand/supply data of major commodities market conditions (daily, weekly, and monthly)	②	J/E	P/D	O/M	

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
Nihon Keizai Shimbun, Inc. (NIKKEI)	Consumer Radar	Originally obtained data on the attitudes and reality of consumer behavior toward financial issues	②	J	P/D	O/M/C	U.S.A., U.K., Germany, France, Switzerland, Italy, Canada, Hong Kong, Singapore, Korea
	Consumer Statistics Data	7,000 series of statistical data on consumer price from the General Affairs Agency	②	J/E	P/D	O	
	Corporate Action Related Data	Data related to new stock issuing such as patterns of fund raising, increase and decrease of capital, stock split, and other information on fund raising for listed companies	②	J/E	P/D	O/M	
	Corporate Profile	Description of Japanese major companies. Data elements such as name of CEOs, address, telephone number, year established, outline of business, major stock holders, summarized financial data, sales by line of business, are included	②	J/E	P/D	O/M/C	
	Daily Exchange Rate & Interest Rate Data	Daily data of foreign and domestic exchanges	②	J/E	P/D	O/M	
	Earnings Estimate for Listed Companies	Estimated and actual data of balance of settlements of accounts at the end of fiscal year, interim closing, and consolidated financial statements for listed companies	②	J/E	P/D	O/M	
	Economic Data by Size	Economic statistical data by size of small-to-medium sized companies based on data from the Small and Medium Enterprises Agency and the Smaller Business Finance Corporation	②	J/E	P/D	O/M	
	Energy Data	Demand/supply data and cost data on petroleum, coal, electric, gas, and nuclear power, as well as general economic statistical data	②	J/E	P/D	O/M	
	Financial Statement for Banks	Balance of settlements of accounts for banks since 1974	②	J/E	P/D	O/M/C	
	Financial Statement for Insurance Companies	Balance of settlements of accounts for non-life insurance companies submitted to the Ministry of Finance since 1983	②	J/E	P/D	O/M/C	

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
Nihon Keizai Shimbun, Inc. (NIKKEI)	Financial Statement for Listed Companies	Balance of settlements of accounts at the end of fiscal year, interim closing, and consolidated financial statements, since 1964, for listed companies other than banks, securities houses, and insurance companies	②	J/E	P/D	O/M/C	U.S.A., U.K., Germany, France, Switzerland, Italy, Canada, Hong Kong, Singapore, Korea
	Financial Statement for Security Houses	Balance of settlements of accounts for security houses submitted to the Ministry of Finance	②	J/E	P/D	O/M/C	
	Financial Statement for Unlisted Companies	Financial report information submitted to the Ministry of Finance by unlisted major companies since 1977	②	J/E	P/D	O/M/C	
	Flash Financial Report for Listed Companies	Balance of settlements of accounts at the end of fiscal year, interim closing, and consolidated financial statements for listed companies other than banks security houses, and insurance companies, as disclosed	②	J/E	P/D	O/M	
	Futures Data	Trading and price data of forward buying stock and bond	②	J/E	P/D	O/M	
	Industrial Data	Statistical data on various industry obtained from MITI and industrial associations	②	J/E	P/D	O/M	
	International Trade Statistics	International trade statistics of commodities and countries based on the Ministry of Finance data	②	J/E	P/D	O	
	Japanese Economic Model	Quarterly model of short-term forecast for Japanese economy, integrating the hole aspects of Japanese economy including energy and finance. Monthly 'Standard Forecasts' with updated information is provided, capable of customized simulation	②	J/E	P/D	O	
	Major Market Indices Data	Nikkei stock price average data, stock price average data for Nikkei 500 major stocks, volume of margin transactions for three exchanges, and others	②	J/E	P/D	O/M	
	Marketing Report for Unlisted Companies	Marketing report information submitted to the Ministry of Finance by unlisted major companies since 1977	②	J/E	P/D	O	
	News Flash	Real-time daily news from all over the world, categorized by subject	③	J/E	P/D	O	

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
Nihon Keizai Shimbun, Inc. (NIKKEI)	Newspapers and Magazines for Text Search	Articles from news papers including four Nikkei publications and several magazines published by Nikkei BP	③	J/E	P/D	O	U.S.A., U.K., Germany, France, Switzerland, Italy, Canada, Hong Kong, Singapore, Korea
	Nikkei Macro Economic Statistics	12,400 major national statistics of Japanese economy including statistics of earnings, production, corporate management, finance, international trade, international balance of payments, labor, commodity prices, and consumption	②	J/E	P/D	O/M	
	Nikkei Monetary Databank	Major economic statistical data including money supply, interest rates, capital circulation, and other general financial statistics	②	J/E	P/D	O/M	
	Option Data	Trading and price data, volume, and positions of options and stock price index options	②	J/E	P/D	O/M	
	Personnel Data Bank	Personnel data of executives of major companies and managing staff of government employees. Data elements such as title, place of employment, home address, birth date, educational history, graduate data are included	②	J	P/D	O/M	
	Portfolio Related Data Service	Various indices on risks and returns in Japanese and US stock market investment with portfolio evaluation and optimization system	②	J/E	P/D	O	
	POS Data	POS data of 1,000,000 items including foods, household appliances, and others obtained from 400 stores	②	J	P/D	O/C	
	Regional Databank	Regional data including area, population, housing, land price, number of establishments by industry, and shipments for 3,400 cities, towns, and villages	②	J/E	P/D	O	
	Regional Economic and Financial File	Regional market data including industry, finance, local public finance, consumption, commodity price, labor, and commerce for the metropolises and districts	②	J/E	P/D	O	
	Regional Input Output Table	Input output tables within and between regions provided by MITI	②	J/E	P/D	O	

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
Nomura Research Institute, Ltd. (NRI)	Short-Term Model for Seven Advanced Nations	Quarterly metrical model for Japan, U.S.A., U.K., France, Germany, Italy and Canada, intended to provide short-term forecasts	②	J/E	P/D	O/M	U.S.A., U.K., Germany, France, Switzerland, Italy, Canada, Hong Kong, Singapore, Korea
	Statistical Data of Prices	Wholesale price indices, import price indices, and input-output indices from the Bank of Japan	②	J/E	P/D	O	
	Statistics on Construction	Statistics on orders received, starting works, cost of construction, and other construction related statistical data	②	J/E	P/D	O/M	
	Statistics on Corporations	Estimated statistical data based on 'Statistics on Corporations', published by the Ministry of Finance, updated quarterly	②	J/E	P/D	O/M	
	Statistics on Products, Shipments, and Inventory	Statistics on products, shipments, and inventory based on MITI's data	②	J/E	P/D	O/M	
	Stock Bond Data	Stock data of listed companies and over-the-counter trading in national stock market and bond data for Tokyo and Osaka Exchanges	②	J/E	P/D	O/M	
	Technical Indices for Industries and Each Issue	Basic indices and indices by industry as well as value added indices data on Tokyo and Osaka Exchanges	②	J/E	P/D	O	
	Unlisted Debenture Data	Evaluated market price of unlisted public offering debenture calculated based on the circular notice from the Ministry of Finance	②	J/E	P/D	O/M	
QUICK Corp. QUICK Corp.	World Economic Long-Term Model	Annual metrical model for long-term forecasts of the world 9 regions. Capable of customized simulation	②	J/E	P/D	O	U.S.A., Germany, U.K., Switzerland
	DataLine	Investment Environment Database Stock Database; Debt Securities Database; NRI Index Database	②	J/E	P/D	O	
QUICK Corp. QUICK Corp.	NR/E	Information of Japanese economy, industry, and finance	②	E	P	O	U.S.A., Germany, France, U.K., Belgium
	QUICK VIDEO-I	Real-time distribution of the stock price, market conditions, closing account, financial information, and news from all the securities exchange in Japan; stock price and index from overseas major securities exchange market	②	J/E/O :Numeric	P/D	O	

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
	QUICK-10	Integrated financial information systems for traders, offering domestic and international stock information and related news. Automatically updated with various functions including name registration, graph and chart development	②	J/E/O :Numeric	P/D	O	Hong Kong, Korea, Singapore, Australia and others
	QUICK-10E	A version of QUICK-10 targeted for Europe, U.S.A. and Middle East	②	J/E/O :Numeric	P/D	O	U.K., U.S.A., Switzerland, Germany, France, Bahrain and others
	QUICK-21 WATCH II	Distribution of the automatically up-dated information on individual stocks and bonds, the business results and financial condition of listed companies, various rankings, charts and Nikkei Shimbun news, with the function of portfolio management using table-calculation software.	②	J/E/O :Numeric	P/D	O	Hong Kong
	QUICK-FF	Real-time information of future market and option with the capability of flexible selection, calculation and editing based on one's investment strategy	②	J/E/O :Numeric	P/D	O	
	QUICK-VS	Multi-vendor terminal sharing system for QUICK and other financial information vendors	②	J/E/Nu	P/D	O	U.K.
Research Organization for Information Science & Technology (RIST)	ATOMICA, Encyclopedia on Nuclear Energy	Retrieved of data on nuclear energy with telecommunication to promote public acceptance	①	J	P/D	O	
Technomics, Inc.	Pharmcast Data	Information on medicines and pharmaceuticals	①/②	E	P	M	U.S.A., Europe
TEIKOKU DATABANK, LTD. (TDB)	COSMOS2	Descriptive information of 210,000 Japanese companies	②	E	P	O/C	
The Japan Information Center of Science and Technology (JICST) /JOIS	JCATALOG (JICST Holding List File)	Machine-readable catalog of JICST library collection	③	J	P/D	O/C	U.S.A., U.K., Germany, Korea
	JCLEARING (JICST File on Current Science and Technology Research in Japan)	Description on research projects planned or ongoing in Japanese public research institutions, based on questionnaire survey	①	J	P/D	O	
	JCST (JICST File on Science and Technology)	Bibliographic information, with abstracts, on 670,000 articles in the fields of science and technology, collected from scholarly journals, proceedings, technical notes, public literature, and others in 50 countries	①	J	P/D	O	

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
The Japan Information Center of Science and Technology (JICST) /JOIS	JICST QUICK FILE	Database of files and bibliographic data of JICST's Collection without abstracts on keywords	①	J	P/D	O	U.S.A., U.K. Germany, Korea
	JICST-E (JICST File on Science, Technology, and Medicine in Japan)	Bibliographic information, with abstracts, of literature in the fields of science, technology, and medicine in JICST File on Science and Technology and JICST File on Medical Science, translated into English	①	E	P/D	O	
	JMEDICINE (JICST File on Medical Science in Japan)	Bibliographic information, with abstracts, of articles in the fields of health science published in Japan, compiled from 'Igaku Chuo Zasshi' (abstract journal of medicine published since 1903) and JICST Domestic Medical File offered since 1981	①	J	P/D	O	
The Japan Information Center of Science and Technology (JICST) /STN	JGRIP	Description of research projects planned or ongoing in Japanese public research institutions	①	E	P/D	O	U.S.A., Europe, U.K. and others
	JICST-E plus	Bibliographic information, partially with abstracts, of Japanese literature in the fields of science, technology, and medicine, translated into English	①	E	P/D	O	
The Long Term Credit Bank of Japan (LTCB)	Database for Overseas Sales Offices	Company profile information	②	E	P	O	U.S.A., U.K., Hong Kong
THE YOMIURI SHIMBUN	THE DAILY YOMIURI DATABASE	Electronic version of 'The Daily Yomiuri' a Newspaper written in English	③	E	P	O	U.S.A., Europe
	YOMIDAS	Articles from Yomiuri Shimbun including Tokyo, Osaka, Western, and Central versions	③	J	P	O	
Tokyo Shoko Research, Ltd.	CD-ROM JAPAN 250,000	CD-ROM JAPAN 250,000 contains information on the 250,000 largest Japanese businesses	②	E	P	C	U.S.A., Europe, Asia
TOYO KEIZAI INC.	Business Performance Forecasts	Forecast data of business performance of 2,200 public companies and 600 over-the-counter companies	②	J/E	P	M	Worldwide
	Flash Report (Tanshin)	Sole and consolidated account information on 2,200 public and on 600 over-the-counter companies	②	J/E	P	M	
	Major Shareholders	Top 20 shareholders of 2,200 public and 600 over-the-counter companies	②	J/E	P	M	

**Table 2 Japanese Databases Accessible Overseas (1995:Distributors/Agents)**

Subject ①:Science and Technology Language J:Japanese Vendor Status P:Producer Medium O:Online  
 ②:Economics, Business E:English D:Distributor M:Magnetic Tape  
 and Finance O:Others A:Agent or Floppy Disk  
 ③:General or Others T:Telecommunication Carriers C:CD-ROM/CD-I

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
Asia Data Research, Inc (ADR)	ADR Market Trend Search	Retail panel data of home appliances and photo cameras in Asian countries	②	J/E	D	M	Hong Kong, China, Indonesia, Singapore and others
	GfK RETAIL PANEL	Retail panel data of home appliances and photo cameras in European countries	②	J/E	A	M	Europe
CHEMICAL DATA SERVICE INCORPORATED (CDS)	ECHOICE	Directory of Chinese chemical products and manufacturers	②	E	A	M	U.S.A., E.U.
DENTSU INC.	ELNET	Articles, with full-text image data, from 50 Japanese major newspapers and from 130 Japanese journals including monthly economic reports	③	J	A	O	U.S.A., Hong Kong, France
G-Search Limited	ADMINISTRATIVE REFORM COMMITTEE'S BULLETIN	Prompt reports of Administrative Reform Council's discussion and announcement. The Council started at Dec. 19, 1994	③	J	D	O	Worldwide
	ADMINISTRATIVE REFORM COUNCIL'S BULLETIN	Provide Information of the Administrative Reform Council's discussion and announcement	③	J	D	O	
	AERA Database	Collection of articles from weekly magazine 'AERA'	③	J	D	O	
	ASAHI ONLINE DATABASE	Collection of articles in English from 'Asahi Evening News' and English version of 'Asahi News Services'	③	E	D	O	
	CAR SENSOR	Articles from 'CAR SENSOR' the automobile journal	③	J	D	O	
	Catalog of Journals and Newspapers	Catalog of domestic journals, newspapers, and newsletters with their circulation, price, description and codes	③	J	D	O	
	CD New Score Information	Information on newly published and forth-coming CD titles	③	J	D	O	
	CNN TRANSCRIT NEWS	Collection of summaries of TV news presented by Journal Graphics Co., Ltd.	③	J	D	O	
	Company Information by Teikoku Databank	Profiles of more than 1,000,000 companies in Japan	②	J	D	O	



Company	Database	Description	Subject	Language	Status	Medium	Main Countries
G-Search Limited	Company Information by Tokyo Shoko Research	Profiles with performance information for current three years of more than 500,000 companies in Japan	②	J	D	O	Worldwide
	Company Information Retrieval Service	Cross-file retrieval system from several databases of newspapers and company profiles	②	J	D	O	
	Cross-File Retrieval of Company Information	Cross-file retrieval system from eight company databases	②	J	D	O	
	Database of Directories	Bibliographic information and general description on directories published in Japan	②	J	D	O	
	DIAMOND Personnel Directory of Companies	Personnel directory of major companies in Japan with personnel changes and corporate structure	②	J	D	O	
	DNN INFORMATION INDUSTRY TODAY	Collection of articles from "DAILY NETWORK NEWS" and by-weekly "IBM WATCHING" published by Network News Co., Ltd.	③	J	D	O	
	ECONOMIC PLANNING AGENCY BULLETIN	Collection of articles announced by Economic Planning Agency	③	J	D	O	
	ECONOMIST	Electronic version of 'Economist' journal, full-text	③	J	D	O	
	Executives' Personal Profile by Tokyo Shoko Research	Biographical information with address of executives of more than 500,000 companies in Japan	②	J	D	O	
	Extraordinary Administrative Research Council and the Administrative Reform Council Report	Reports and suggestions from Extraordinary Administrative Research Council and the Administrative Reform Council	③	J	D	O	
	Financial Information by Teikoku Databank	Financial records of companies in Japan	②	J	D	O	
	Financial Information by Tokyo Shoko Research	Financial records of companies in Japan	②	J	D	O	
	Flash of the Administrative Reform Council's deliberations	Provide outline of the Administrative Reform Council's discussions and announcements	③	J	D	O	

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
G-Search Limited	Gendai Yogo no Kiso Chishiki (Basic Knowledge of Modern Terminology)	Electronic version of the 'Gendai Yogo no Kiso Chishiki (Basic Knowledge of Modern Terminology)' published by Jiyu Kokuminsha	③	J	D	O	Worldwide
	GENETIC INFORMATION SEARCH & ANALYSIS SERVICES	Services to search for DNA-base data	①	J	D	O	
	IBJ-NIKKO INFORMATION SYSTEMS' DATABASE-JAPAN ECONOMICS	Monthly data of foreign trade and domestic trade. Data elements such as production, inventory, shipment, import, export. The data conveyed all 36 types of Japanese industry	②	J	D	O	
	IBJ-NIKKO INFORMATION SYSTEMS' DATABASE-JAPAN INDUSTRIES	Major macro-economic statistical data announced by government, administrative agencies or private organizations	②	J	D	O	
	Industrial and Technical Information on China	Major articles related to industry and technology from Chinese domestic newspapers	②	J	D	O	
	Industrial News	News releases from companies, government bodies, and related organizations	②	J	D	O	
	Information Industry Hotline	Flash reports of 'The Daily Network News'	③	J	D	O	
	INFORMATION OF BANKRUPT COMPANIES	Prompt reports of bankrupt companies	②	J	D	O	
	JETRO ACE	Collection of reports and statistics from 80 overseas offices of JETRO	②	J	D	O	
	JTB Hotel Information	Directory of domestic hotels and lodges	③	J	D	O	
	Kagaku Kogyo Nippo Database	Articles from 'Kagaku Kogyo Nippo' the leading newspaper for chemical industry	②	J	D	O	
	Law Database	Full-text of current laws held by the General Affairs Agency	②	J	D	O	
	LEX/DB	Full-text of civil and administrative cases and related information	②	J	D	O	
	Listed and Over-the-Counter Companies by Toyo Keizai	Detailed information on the listed, over-the-counter, and foreign affiliated companies in Japan	②	J	D	O	

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
G-Search Limited	MAINICHI Shimbun DATABASE	Collection of articles from "MAINICHI DAILY NEWS"	③	J	D	O	Worldwide
	Market Search on Company Trends	Reference to the marketing research information on companies	②	J	D	O	
	Market Search on Consumer Trends	Reference to the marketing research information based on questionnaire to consumers	②	J	D	O	
	Market Search on Products and Industries	Reference to the marketing research information on all industries and their products in Japan	②	J	D	O	
	Market Search Reference directory	Reference to the marketing research reports and articles	②	J	D	O	
	Music CD Catalog	Bibliographic and price information with critics for music CD	③	J	D	O	
	NATIONAL TOURIST INFORMATION & MAYOR PROFILE DATABASE	Bibliographical information of Japanese local governors and mayors	③	J	D	O	
	NATIONAL TOURIST INFORMATION DATABASE	Information on sight-seeing, such as depth of snow, events, availability of parking lots and hotels, and coupons of ski-ground, presented by cities, towns and villages in Japan	③	J	D	O	
	NEW BUSINESS INDUSTRY REPORT	Research report of remarkable industries' trends and issues including description, structure, and profitability information	②	J	D	O	
	Nihon Kogyo Shimbun Database	Collection of articles from 'Nihon Kogyo Shimbun'	③	J	D	O	
	Nihon Nogyo Shimbun Database	Collection of articles from 'Nihon Nogyo Shimbun'	③	J	D	O	
	Nikkan Kogyo Shimbun Database	Collection of articles on new products and technology from 'Nikkan Kogyo Shimbun'	③	J	D	O	
	NIKKAN SPORTS	Collection of articles from 'Nikkan Sports' newspaper	③	J	D	O	
	OVERSEAS POPS DC CATALOG DATABASE	Collection of articles from "CD WORLD REFERENCE GUIDE" published by CD International Co., Ltd.	③	J	D	O	

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
G-Search Limited	PHARMA JAPAN	Collection of articles from "PHARMA JAPAN" for overseas' medical and medicine business men. It includes full texts	②	E	D	O	Worldwide
	Pharmaceutical Company Information	Detailed company profiles of pharmaceutical manufacturers and wholesalers	②	J	D	O	
	Pharmaceutical Information Service	Pharmaceutical information from the price standards for medicines based on the attached documents, with urgent news	①	J	D	O	
	PIA EVENT SPONSORSHIP DATA INFORMATION	Information of entertainment such as sports, events, dramas and concerts which are played at Tokyo Metropolitan area	③	J	D	O	
	Reference Guide to PC Journals	Collection of articles from 15 major PC journals	③	J	D	O	
	Sankei Shimbun Database	Articles from 'Sankei Shimbun'	②	J	D	O	
	Shokuryo Shimbun Database	Articles from 'Shokuryo Shimbun' the leading newspaper for food industry	②	J	D	O	
	SKI INFORMATION DATABASE	Information of snow-status and hotel reservation status of 300 ski-playing spots in Japan	③	J	D	O	
	SUNDAY MAINICHI DOCTOR'S PROFILE 2800	Profiles of 2800 doctors by whom you wish to be diagnosed. These are the articles of 'SUNDAY MAINICHI'	①	J	D	O	
	SUPONICHI CELEBRITY NEWS FAX SERVICE	Profiles of known people presented on the articles of 'SUPONICHI (a Daily Sports)' newspapers. These are stored with image data and available by fax	③	J	D	O	
	TEIKOKU DATABANK: JAPANESE COMPANIES	Business information of 180,000 Japanese companies	②	E	D	O	
	THE DAILY YOMIURI DATABASE	Collection of articles from "THE DAILY YOMIURI" published by the Yomiuri Shimbun. It includes full texts	③	J	D	O	
	Title of Weekly and Monthly Magazine	Title information of 32 popular magazine	③	J	D	O	
	TITLE SEARCH	Title information of 32 popular journals	③	J	D	O	

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
G-Search Limited	VIDEO & CD CATALOG DATABASE	Collection of softwares of visual laser-disc	③	J	D	O	Worldwide
	Video & LD Flash	Domestic Information of 32 popular journals	③	J	D	O	
	Yomiuri Shimbun Database	Collection of articles from 'Yomiuri Shimbun' and 'Yomiuri Katei Shimbun'	③	J	D	O	
Information Services International Dentsu, Ltd. (ISID)	Asahi Minryoku	Historical series of statistical data on regional economy by prefectures and areas	②	J	D	M	
	JSD	Real-time stock price information on Tokyo and Osaka Stock Exchanges, provided by Jiji Press, Ltd.	②	J	D	O	
Japan Association for International Chemical Information (JAICI)	QCLDB	Bibliographic database of ab initio quantum chemistry	①	E	D	M/C	U.S.A., Europe
NEC Corporation (NEC)	C&C-VAN DATABASE	Information on companies, economy, and international trade	②/③	J	D	O	U.S.A., U.K., and others
	DIALINE	Information on books published in Japan and others	②/③	J	D	O	
	ELISNET	Information on electronic devices including semiconductor devices	①	J	D	O	
	NICHIGAI ASSIST	Information on biographies, books, and journals	③	J	D	O	
	NIKKEI TELECOM BiZ	Articles from newspapers, company information, and other general textual information, with downloading capability	②/③	J	D	O	
NIFTY Corporation	Administrative Information on the Restoration of Margin	Publicized documents on restoration of margin from rising of the yen	②	J	D	O	Worldwide
	AERA Database	Collection of all the articles from weekly magazine 'AERA' published by Asahi Shimbun	③	J	D	O	
	Apple & Macintosh	Information on Apple and Macintosh	③	J	D	O	
	Asahi News Service	English version of articles from 'Asahi Shimbun'	③	E	D	O	
	Asahi Shimbun Database	Collection of articles from 'Asahi Shimbun'	③	J	D	O	
	Asahi Shimbun Newflash	Newsflash from 'Asahi Shimbun'	③	J	D	O	
	Asia Newsflash	Business information on NIES & ASEAN countries and China	②/③	J	D	O	

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
NIFTY Corporation	Best Ten Toys of the Week	Sales data of toys in the week	②	J	D	O	Worldwide
	Blood Line and Racing Prediction of Racing Horses	Prediction of race results just before the high prize horse races held on Saturday and Sunday	③	J	D	O	
	Book Street	Information on new books, best-sellers and lectures	③	J	D	O	
	Book/Monthly	Monthly revision of new information from 'BOOK'	③	J	D	O	
	Books on PC	Review of books related personal computers	③	J	D	O	
	Business Information Guide	Directory of business related organizations	③	J	D	O	
	Business Letter Examples	Collection of Japanese business letter examples	③	J	D	O	
	CAR SENSOR	Articles from 'CAR SENSOR' the automobile journal	③	J	D	O	
	CD New Score Information	Information on newly published and forthcoming CD titles	③	J	D	O	
	Ceremonial Precedents	Ceremonial manners and precedents on marriage, funeral, and ancestral worship	③	J	D	O	
	Chunichi Shimbun Chubu District News	Collection of local articles from 'Chunichi Shimbun Chubu (Central Japan) version	③	J	D	O	
	Chunichi Shimbun Headline News	Summary of newflash from 'Chunichi Shimbun'	③	J	D	O	
	Chunichi Shimbun News Summary	Summary of selected articles from 'Chunichi Shimbun' morning edition	③	J	D	O	
	Chunichi Shimbun Tokai-Hokuriku Financial Information	Financial information on nine prefectures in Tokai-Hokuriku region from 'Chunichi Shimbun'	②	J	D	O	
	Cosmo Calendar Astrology	Fortune of love derived from the astrology with scientific analysis based on the Space ecology	③	J	D	O	
	COSMOS2	Financial and descriptive data on Japanese companies from Teikoku Databank	②	J	D	O	
	Current Index to Journal Articles	Index to current articles of newly published journals, categorized into various fields	③	J	D	O	

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
NIFTY Corporation	Current Index to PC Journals	Summary of articles from major PC journals	③	J	D	O	Worldwide
	Database of Directories	Bibliographic information and general description of directories published in Japan	③	J	D	O	
	Dataquest Industry Analysis of Information Systems	Trends and analytical information on information systems industry	①	J	D	O	
	Dial Q2 Program Guide	Description of programs offered from Dial Q2	③	J	D	O	
	DIAMOND Personnel Directory of Companies	Electronic version of the 'Directory of Personnel in Japanese Companies' published by Diamond Press	③	J	D	O	
	Directory of Discount Stores	Directory of 1,080 discount stores	③	J	D	O	
	Directory of Facsimile Numbers	Electronic version of 'Joho FAX Denwacho (FAX Directory)' published by TOMOE	③	J	D	O	
	Directory of Restaurants in Keihanshin Area	Directory of gourmet restaurants in Kyoto, Osaka, and Kobe area	③	J	D	O	
	Domestic Concert Information	Information on concerts held all over Japan by area and genre	③	J	D	O	
	Economic Trends	Macro economic information including economic trends for World and Japan	②	J	D	O	
	Economic Trends Reports of Small Businesses	Electronic version of 'Chusho Kigyo (Small Business) Business Radar'	②	J	D	O	
	ECONOMIST	Electronic version of 'Economist' journal published by Mainichi Shimbun	②	J	D	O	
	Educational News from Mainichi Shimbun	Articles on education and entrance examinations from 'Mainichi Shimbun'	③	J	D	O	
	ELISNET (Technical Information on Semi-Conductors)	Technical information on semi-conductor devices	①	J	D	O	
	Employment Information of Japanese Companies	Employment trends of companies in Japan	②	J	D	O	

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
NIFTY Corporation	English Business Letter Examples	Collection of business letter examples in English	③	E	D	O	Worldwide
	English Letters for Technical Fields	Collection of examples of English letters and sentences for technical use	③	E	D	O	
	English News Release	Collection of news release in English	③	E	D	O	
	Extraordinary Administrative Research Council and the Administrative Reform Council Report	Reports and suggestions from Extraordinary Administrative Research Council and the Administrative Reform Council	②	J	D	O	
	FAIRS AND EVENTS	Newsflash on fairs and events held in Japan	③	J	D	O	
	Finding Books	New book information	③	J	D	O	
	Fishing information from Kansai	Fishing information on Western Japan from weekly 'Tsuru Sunday'	③	J	D	O	
	Flash of the Administrative Reform Council's Deliberation	Provide the outline of the deliberation from the Administrative Reform Council's discussion and announcement	②	J	D	O	
	Flower Market Information	Price information on flowers at Tokyo Ohta Flower Market	②	J	D	O	
	FM & OASYS SERIES	Information and training course guide for OASYS and FM-series of Fujitsu	③	J	D	O	
	Gendai Yogo no Kiso Chishiki (Basic Knowledge of Modern Terminology)	Electronic version of the 'Gendai Yogo no Kiso Chishiki (Basic Knowledge of Modern Terminology)' published by Jiyu Kokuminsha	③	J	D	O	
	Guide to CD Titles	Articles from monthly 'CD Journal'	③	J	D	O	
	Guide to Excellent Eating Places in Tokyo	Electronic version of 'Tokyo Oishiimise Guide (Tokyo Excellent Eating Places)'	③	J	D	O	
	Guide to Golf Membership Market	Information on golf-club membership prices	③	J	D	O	
	Guide to High-Tech Training Courses	Information on training courses held by Kodo Gino Kaihatsu Center (High-technology Development Center)	③	J	D	O	
	Guide to Marine Pilots License	Information on how to obtain 4th grade marine pilots' license	③	J	D	O	



Company	Database	Description	Subject	Language	Status	Medium	Main Countries
NIFTY Corporation	Guide to PC Magazine	Bibliographic information on major PC magazines	③	J	D	O	Worldwide
	Guide to PC Related Goods	Database of software and book information on PC	③	J	D	O	
	Guide to Popular Spots	Information on the popular shops based on the questionnaire survey to 20s	③	J	D	O	
	Hit Product Information	Information on remarkable and well sold commodity	②/③	J	D	O	
	Hokuriku Honobono Information	Sightseeing guide of Hokuriku Region	③	J	D	O	
	Home Town Information	Information on cities, towns, and villages all over Japan	③	J	D	O	
	Horse Race Tip	Numerical data of horse race forecasts	③	J	D	O	
	Hotel Directory	Directory of member hotels of Japan Hotel Association	③	J	D	O	
	House of Law Information	Information on law related to daily life and on revision of law	③	J	D	O	
	I-N Industrial Statistics	Production, shipment, stock data and trade information for all industries in Japan	②	J	D	O	
	Industrial and Technical Information on China	Major articles related to industry and technology from Chinese domestic newspapers	①	J	D	O	
	Industrial News	News-release from companies, governments, and related organizations	②	J	D	O	
	Information for Obtaining Driver's License	Information on how to obtain driver license	③	J	D	O	
	Information on Administration of the Ministry of Posts and Telecommunications	Information on the formation of policy by the Ministry of Posts and Telecommunications	②	J	D	O	
	Information Industry Hotline	Online news-flash for 'The Daily Network News', an industrial newsletter for information industry	①/③	J	D	O	
	Information on U.S.A. by Front Line	Information on economy, business and Japanese affiliated companies in U.S.A.	③	J	D	O	
	Introduction to C Language	Information on how to write programs in C-Language	③	J	D	O	
	JAPAN MARC	Catalog of books published in Japan, delivered to the National Diet Library	③	J	D	O	

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
NIFTY Corporation	JETRO ACE	Collection of reports and other materials from overseas points of JETRO, provided with textual and numerical information	②	J	D	O	Worldwide
	JETRO-WINDS	Information for promotion of Japanese imports including trade fairs and after-service of imported goods	②	J	D	O	
	Jiji Press Sport News	Collection of articles on sports from Jiji Press	②	J	D	O	
	JTB hotel Information	Directory of domestic hotels and lodges	③	J	D	O	
	Judicial Precedents of Intellectual Property	Laws and judicial precedents related to intellectual property since 1975	②	J	D	O	
	Kagaku Kogyo Nippo Database	Articles from 'Kagaku Kogyo Nippo' the leading newspaper for chemical industry	②	J	D	O	
	Kyodo Financial and Economic Newstflash	Economic newstflash from Kyodo News Service	②	J	D	O	
	Kyodo Flash News Database	Online newstflash from 'Kyodo News Service'	③	J	D	O	
	Kyodo Newstflash	Newstflash from 'Kyodo News Service'	③	J	D	O	
	Law Database	Full-text of current laws held by the General Affairs Agency	②	J	D	O	
	Letax Proxy Service	Sending Letax of the Post Office using E-mail	③	J	D	O	
	Library of Questionnaire on Living People	Digest version of 'Seikatsusha (Living People) Data'	③	J	D	O	
	MAINICHI DAILY NEWS	English newstflash of Mainichi Shimbun	③	E	D	O	
	MAINICHI ONLINE DATABASE	Collection of articles from 'Mainichi Daily News'	③	E	D	O	
	Mainichi Shimbun Company News Release	News release from Japanese companies and industries	②	J	D	O	
	Mainichi Shimbun Database	Collection of articles from the 'Mainichi Shimbun'	③	J	D	O	
	Mainichi Shimbun Headline News	Summary of articles from 'Mainichi Shimbun'	③	J	D	O	

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
NIFTY Corporation	Mainichi Shimbun Health and Medical Information	Information on health care, beauty care, and medical services	③	J	D	O	Worldwide
	Mainichi Shimbun Lottery Information	Referral of winning number of lottery and other information	③	J	D	O	
	Mainichi Shimbun Newsflash	Newsflash from 'Mainichi Shimbun'	③	J	D	O	
	Mainichi Shimbun Photographic Database	News photograph database	③	J	D	O	
	Mainichi Shimbun Regional News	Real-time regional news from 'Mainichi Shimbun'	③	J	D	O	
	Manual of Company Events and Festivals	Instructional manual on promoting and conducting company events and festivals	③	J	D	O	
	Market Search	Reference to the market research reports issued by public and private institutions	②	J	D	O	
	Medical Information on Remarkable Diseases	Description by medical practitioners on heart attack, cardiac infarction, cerebral apoplexy, hepatitis, ulcer of stomach and duodenum, gastric cancer, and atonic dermatitis	③	J	D	O	
	MRI Business Letter	Full-text of publicly held research reports written by researchers of the Mitsubishi Research Institute	②	J	D	O	
	MRI Seminar Lectures	Full-text of lectures at seminars held by Mitsubishi Research Institute	③	J	D	O	
	New Business Industry Report	Research reports of 350 remarkable industries' business trends and analysis	②/③	J	D	O	
	New-Business Hi-Tech Information	Technological and products information on Japanese high-technology industries	①/②	J	D	O	
	NHK News Texts	Broadcasted news texts by NHK	③	J	D	O	
	NHK Newsflash	Broadcasted news texts by NHK	③	J	D	O	
	NICHIGAI ASSIST	Information on biography (WHO), books (BOOK), journal articles (MAGAZINE), and corporate management tactics (MANAGEMENT)	②/③	J	D	O	

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
NIFTY Corporation	Nihon Kogyo Shimbun Database	Collection of articles from 'Nihon Kogyo Shimbun'	③	J	D	O	Worldwide
	Nihon Nogyo Shimbun Articles	Collection of articles from 'Nihon Nogyo Shimbun'	③	J	D	O	
	Nihon Shokuryo Shimbun Database	Collection of articles from 'Nihon Shokuryo Shimbun'	③	J	D	O	
	Nikkan Kogyo Shimbun Database	Collection of articles from 'Nikkan Kogyo Shimbun'	③	J	D	O	
	Nikkan Sports Newspaper Information	Collection of articles from 'Nikkan Sports Newspaper'	③	J	D	O	
	NIPPAN MARC	Catalog of books published in Japan, distributed by Nihon Shuppan Hambai	③	J	D	O	
	NTT Town Page	Telephone directory of 1,110,000 companies	③	J	D	O	
	NY Entertainment Information	Updated information on events held in New York City	③	J	D	O	
	Online Stock Price Newflash	Stock price news from first and second section of Tokyo Stock Exchange (TSE)	②	J	D	O	
	ORICON Music Guide	Ranking list of popular songs and artists information	③	J	D	O	
	PC Hardware Database	Description and price information on PC hardware products	③	J	D	O	
	PC New Products Weekly	Description and price information on new PC products	③	J	D	O	
	Per-Golf Information	Results of tournaments and new products on golf	③	E	D	O	
	Pharmaceutical Company Information	Company information on pharmaceutical industry	②	J	D	O	
	PIA Art Museum Guide	Exhibition schedule for 50 museum near Tokyo	③	J	D	O	
	PIA Cinema Club (Western and Domestic Movies)	Plots, casts, and awards of more than 15,000 movies	③	J	D	O	
	PIA Road Show Information	Updated road show guide	③	J	D	O	
	PIA Ticket Guide	Purchasing guide for tickets	③	J	D	O	
	PIA Ticket Information of the Day	Day ticket information on concerts held within and close to Tokyo City	③	J	D	O	

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
NIFTY Corporation	Popularity and Ability of Racing Horses	Information concerning the horses registered in the race	③	J	D	O	Worldwide
	Precious Metal Market	Information on precious metal prices	③	J	D	O	
	Professional Baseball Game Newsflash	Daily game news of professional baseball	③	J	D	O	
	Q and A on Taxation	Basic information on taxation in Q & A style with letters of Tax Law	③	J	D	O	
	Questionnaire Data of Youth	Data collected from young women living in the Tokyo Metropolitan Area	③	J	D	O	
	Ranking of University Entrance by Yoyogi Seminar	Information on the difficulty of university entrance examination based on the survey conducted by Yoyogi Seminar, a preparatory school	③	J	D	O	
	Recruit Guide for Mass Communication Industry	Information on seminars and orientations for recruiting new graduate held by mass-communication industry	③	J	D	O	
	Reference to Music of TV, Movie, and Commercial Songs	Information on title, name of artists, and CD new title publications of theme songs and musics of TV programs, movies, and commercial songs	③	J	D	O	
	Reference to Research Reports	Summary of research reports from public and private research institutions	②/③	J	D	O	
	Remarkable New Book Titles	Information on new books by genre from Mainichi Shimbun	③	J	D	O	
	Reports from Mitsubishi Research Institute	Forecasts for 90's of various fields based on case studies	②/③	J	D	O	
	Robots and FA Products	Information on industrial robots and factory automation products	①	J	D	O	
	Safety information on Passengers Abroad	Safety information on Japanese passengers abroad	③	J	D	O	
	Saitama Prefectural Information	Current administrative information announced by Saitama Prefecture	③	J	D	O	
	Sankei Shimbun Database	Collection of articles from morning and evening edition of 'Sankei Shimbun'	②	J	D	O	

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
NIFTY Corporation	Sanwa Money Center Report	Information and analytical reports of Tokyo, London, and New York stock markets	②	J	D	O	Worldwide
	Sanwa Soken Financial and Economic Information	Information on foreign money exchange market and economic news	②	J	D	O	
	Sight-seeing Information	Information on festivals, events, sight-seeing spots, and accommodations	③	J	D	O	
	Special Menu for Rice	Rice related articles extracted from Mainichi, Asahi, and Yomiuri Shimbun	③	J	D	O	
	SPONICHI Sport Topics	Collection of articles related to sports such as Soccer, Rugby and Golf	③	J	D	O	
	Star System Video List	Major video movies casted by popular foreign actors and actresses	③	J	D	O	
	Summary of Weekly and Monthly Magazine	Summary of articles of popular magazines	③	J	D	O	
	SUPONICHI Entertainment Information	Entertainment and show business information	③	J	D	O	
	SUPONICHI F1 News	Newsflash on the results of F1 races	③	J	D	O	
	SUPONICHI FAX Service of Well-known People	Facsimile transmission service of biographical information with pictures published on 'Sports Nippon' since 1967	③	J	D	O	
	SUPONICHI Horse Racing News	Information on horse racings and popular horses	③	J	D	O	
	SUPONICHI Sumo Information	Newsflash on victory or defeat of Sumo matches	③	J	D	O	
	TDN Horse Race Guide	Horse race guide held by JRA	③	J	D	O	
	Teikoku Databank Financial Information	Financial information on 250,000 Japanese major companies	②	J	D	O	
	This Week's Stocks to be Watched	Information on remarkable stocks selected by editors of investment magazines	②	J	D	O	
	Title of Weekly and Monthly Magazine	Title information on 32 popular magazines	③	J	D	O	

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
NIFTY Corporation	TITLE SEARCH	Table of contents of industrial and technological journals issued in Japan	③	J	D	O	Worldwide
	TKC Legal Information	Judicial precedent and related information on civil cases and administrative cases	③	J	D	O	
	Toku-Toku Information	Information on benefits, premiums, and gifts offered from various media	③	J	D	O	
	Tokyo Community Guide	City-life information collected from Tokyo city and its 23 wards	③	J	D	O	
	Tokyo Survival Guide	Guidance information on Tokyo Metropolitan Area in English	③	E	D	O	
	Top News of Morning Newspapers	Newsflash of top articles from national newspapers	③	J	D	O	
	Toyo Keizai Company Information	Detailed information on Japanese listed companies and foreign owned companies	②	J	D	O	
	Travel, Taste and Sports	Profiles and special information on travel, local tastes, and sport facilities	③	J	D	O	
	Trends in New York	City guide for New York City	③	J	D	O	
	Trends in Paris	City guide for Paris	③	J	D	O	
	Trends of Vegetable and Fruit Market	Price information on vegetables and fruits at the Ohta and Tsukiji markets, with those at Osaka market	②	J	D	O	
	TSR Company Information	Summarized data on 500,000 Japanese major companies	②	J	D	O	
	TSR Financial Information	Financial information on 50,000 Japanese major companies	②	J	D	O	
	Tsukiji Fish Market price information	Wholesale price information on flesh fish from Tsukiji Fish Market	②	J	D	O	
	TV and Movie Daily guide	Ratings of TV programs and movies	③	J	D	O	
	Updated Fishing Information	Information on techniques and points of fishing	③	J	D	O	
	Urban Development Information	Urban development and planning information on Japan	③	J	D	O	
	Video and Laser Disk Information	Domestic on-sale information on video, laser disk, and compact disc video	③	J	D	O	

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
NIFTY Corporation	Weekly Flash of 'ECONOMIST'	Collection of articles from 'ECONOMIST' journal of the week	②	J	D	O	Worldwide
	Welcome to 1200 Years of Kyoto	Information on more than 1,000 events and 600 ceremonies held in Kyoto	③	J	D	O	
	World Report	Information extracted from 'Trade-pia' World reports	③	J	D	O	
	Yamagata Regional Information	Sightseeing guide of Yamagata Prefecture	③	J	D	O	
	Yomiuri Shimbun Database	Collection of articles from the 'Yomiuri Shimbun'	③	J	D	O	
	Yomiuri Shimbun Newsflash	Newsflash from 'Yomiuri Shimbun'	③	J	D	O	
Nihon Keizai Shimbun, Inc. (NIKKEI)	Asian Corporate Profile	Description of companies in Asia including 12,000 Chinese manufacturers, 1,800 Korean listed companies, 600 Hong Kong listed companies, and 1,000 Japanese-owned companies in Asia	②	E	D	O/M	U.S.A., U.K., Germany, France, Switzerland, Italy, Canada, Hong Kong, Singapore, Korea
	CITIBASE	Major economic statistics and indices for United States	②	E	D	O	
	Data on Borrowing by Financial Institutions	Data on borrowing by the financial institutions provided by the Industrial Bank of Japan	②	J/E	D	O/M	
	IFS Data	Financial statistics and price indices with GNP for IMF member countries	②	E	D	O	
	Input-Output Tables	Expanded input-output tables originally developed by NIKKEI, basic government table and its supplements, and connected industry input-output tables are included	②	J/E	D	O	
	OECD Economic file	Major economic indices including GNP for IMF member countries	②	E	D	O	
	OECD National Income Statistics File	National expenditure and its itemized break-down for 13 industrial nations	②	E	D	O	
	World Bank External Debt Statistics	Balance of debts and other economic indices of 105 developing countries	②	E	D	O	
Research Institute of International Trade and Industry (RIITI)	Input-Output Table	Input-output table of Japanese industries, provided by the Ministry of International Trade and Industry (MITI)	②	O/Numeric	D	M	U.S.A.



Company	Database	Description	Subject	Language	Status	Medium	Main Countries
Software Development Co., Ltd. (SDC)	EMBL-GDB	Configuration of nucleic acid	①	E	D	C	
	LASL-GDB	Configuration of nucleic acid	①	E	D	C	
	NBRF-PIR	Protein database	①	E	D	C	
	PBIO-CD	Patented biochemical configuration database	①	E	D	C	
	SWISS-PROT	Protein database	①	E	D	C	
Technomics, Inc.	Actfund	Information on antibiotic substances	①	E	D	M	U.S.A., Europe
The Japan Information Center of Science and Technology (JICST)/JOIS	NK-MEDIA (Nikkan Kogyo Shimbun Articles)	Bibliographic information with abstracts of articles related to new products and new technology with related company trends	②	J	D	O	U.S.A., U.K., Germany, Korea
USACO Corporation (USACO)	KMC-Plus	Physiologically activated materials extracted from actinomyces, mold, and bacteria	①	E	D	M	U.S.A., Europe

**Table 3 Japanese Database being Planned for Overseas (1995)**

Subject ①:Science and Technology  
 ②:Economics, Business and Finance  
 ③:General or Others

Language J:Japanese  
 E:English  
 O:Others

Medium O:Online  
 M:Magnetic Tape or Floppy Disk  
 C:CD-ROM/CD-I

Company	Database	Description	Subject	Language	Medium
Institute for Dissemination and Research of Government Data (IDRGD)	Government information online service system	Online database data coming out from government offices, agencies and government councils.	①/②/③	J	O
Japan Association for International Chemical Information	PATENT-ALERT	Collection of Japanese patents of bio-chemical field. It includes titles and keywords.	①	E	C
LTCB Systems Co., Ltd. (a member of THE LONG-TERM CREDIT BANK OF JAPAN)	COMPASS	Contains financial information of Japanese corporations, except financial institutions, disclosing securities reports in accordance with Japanese law.	②	E	O/M
QUICK Corp.	QUICK-21 Dealer	Distribution of information on the securities and money markets in real-time and the technical charts, displayed on the multiple screen with the linkage function. Supporting the dealing and trading strategy with the high-grade market analysis and forecast.	②	J/E/O	O
	QUICK-21 Dealer	Served on the personal computer. Offering information on prices of the domestic and international stock exchanges in real-time, the company data, over-the-counter stocks, foreign exchanges, money rates, commodities, investment and Nihon Keizai Shimbun News.	②	J/E/O	O
The Energy Data and Modelling Center (EDMC)/The Institute of Energy Economics, Japan (IEEJ)	EDMC Energy Data Bank	Comprehensive and systematic records of domestic and overseas energy economic data, which can be retrieved by simple operation.	②	E	O

**Table 4 Address of Overseas Service Points (1995:Producers/Distributors)**

Company	Contacts	Address	Telephone	Facsimile	Status
ADVANSIS (AVS)	ADR Marketing Service Ltd.	Room 2314, Park-in-Commercial Centre, 56 Dundas Street, Yaumatei, Kowloon, Hong Kong	+852-2359-3333	+852-2332-5841	Agent
	ADVANSIS, INC.	Toikawa Bldg., 2-9-20 Shinjuku, Shinjuku-ku, Tokyo 160, Japan	+81-3-3352-2591	+81-3-3350-0589	Headquarters
	GfK Handelsforschung GmbH & Co. KG	Nordwestring 101, D-90319 Nurnberg 90, Germany	+49-911-3950	+49-911-336970	Agent
	THE NPD GROUP, INC.	900 West Shore Road, Port Washington, NY 11050-0402, U.S.A.	+1-516-625-2310	+1-516-625-2444	Partner
Asahi Shimbun	Electronic Media & Broadcasting Division, Asahi Shimbun Company	5-3-2 Tsukiji, Chuo-ku, Tokyo 104-11, Japan	+81-3-5541-8684	+81-3-5541-8694	Headquarters
Asia Data Research, Inc. (ADR)	ADR Marketing Service Ltd.	Room 2314, Park-in-Commercial Centre, 56 Dundas Street, Yaumatei, Kowloon, Hong Kong	+852-2359-3333	+852-2332-5841	Branch; Headquarters
	Asia Data Research, Inc.	7F Fukuya Bldg., 4-3 Yotsuya, Shinjuku-ku, Tokyo 160, Japan	+81-3-3352-6215	+81-3-3352-2579	Headquarters
	GfK Handelsforschung GmbH & Co. KG	Nordwestring 101, D-90319 Nurnberg 90, Germany	+49-911-3950	+49-911-336970	Agent
AXESS INTERNATIONAL NETWORK INC. (AXESS)	AXESS INTERNATIONAL NETWORK INC. (AXESS)	Seafort Square Center Bldg., 2-3-12 Higashishinagawa, Shinagawa-ku, Tokyo 140, Japan	+81-3-5460-7034	+81-3-5460-7009	Headquarters
C. Industrial Research Institute	C. Industrial Research Institute	3-8-14-501 Nishi-Shinjuku, Shinjuku-ku, Tokyo 160, Japan	+81-3-3377-9886	+81-3-3377-9876	Headquarters
CHEMICAL DATA SERVICE INCORPORATED (CDS)	Information Service Division, CHEMICAL DATA SERVICE INCORPORATED	2-15-13 Tsukishima, Chuo-ku, Tokyo 104, Japan	+81-3-3536-1201	+81-3-3536-1210	Headquarters
	TEKNO-INFO CORPORATION	500 Trotwood PL. Louisville, KY 40245-4071, U.S.A.	+1-502-254-5728	+1-502-254-9128	Agent
COMLINE Business Data, Inc. (COMLINE)	COMLINE Business Data, N.Y., Inc.	80 Maiden Lane, 22nd Fl., New York, NY 10038, U.S.A.	+1-212-480-2100	+1-212-344-8074	Branch
	COMLINE Business Data, Inc.	2F, MRX Bldg., 1-12-5 Hamamatsu-cho, Minato-ku, Tokyo 105, Japan	+81-3-5401-4567	+81-3-5401-2345	Headquarters
Database Promotion Center, Japan (DPC)	Database Promotion Center, Japan	7F World Trade Center Bldg., 2-4-1 Hamamatsu-cho, Minato-ku, Tokyo 105, Japan	+81-3-3459-8581	+81-3-3432-7558	Headquarters
Dataquest Japan K.K. (DQJ)	Dataquest Japan K.K.	6F Shinkawa Sanko Bldg., 1-3-17 Shinkawa, Chuo-ku, Tokyo 104, Japan	+81-3-5566-0411	+81-3-5566-0425	Subsidiary in Japan
	Dataquest Inc.	1290 Ridder Park Drive, San Jose, CA 95131-2398, U.S.A.	+1-408-437-8000	+1-408-437-0292	Headquarters

Company	Contacts	Address	Telephone	Facsimile	Status
DENTSU INC.	Electronic Library Division, DENTSU INC.	1-11 Tsukiji, Chuo-ku, Tokyo 104, Japan	+81-3-5551-7116	+81-3-5551-2345	Headquarters
D & B Information Services Japan K.K. (DBIS)	D & B Information Services Japan K.K. (DBIS)	Aobadai Hills 5F, 4-7-7 Aobadai, Meguro-ku, Tokyo 153, Japan	+81-3-3481-3561	+81-3-3481-3570	Branch Office in Japan
EDUCA Inc. (EDUCA)	EDUCA Inc.	4-4-10, Minami-Aoyama, Minato-ku, Tokyo 107, Japan	+81-3-5474-3541	+81-3-5474-6944	Headquarters
Electronic Devices Information Service Co., Ltd.	Electronic Devices Information Service Co., Ltd.	Hirakawa-cho KS Bldg., 5F 2-4-14 Hirakawa-cho, Chiyoda-ku, Tokyo 102, Japan	+81-3-5275-3699	+81-3-5275-3840	Headquarters
ELECTRONIC LIBRARY Inc. (EL)	Electronic Library Division, DENTSU INC.	1-11 Tsukiji, Chuo-ku, Tokyo 104, Japan	+81-3-5551-7116	+81-3-5551-2345	Agent
	ELECTRONIC LIBRARY Inc. (EL)	Colins 8, 8-11-13 Nishi-Gotanda, Shinagawa-ku, Tokyo 141, Japan	+81-3-3779-1211	+81-3-3779-1227	Headquarters
	NI+C International Co.	IBM Kawasaki Bldg., 1-14 Nisshin-cho, Kawasaki-ku, Kawasaki-shi, Kanagawa 210, Japan	+81-44-245-8030	+81-44-245-8027	Agent
G-Search Limited	G-Search Limited	LOOP-X Bldg., 3-9-15 Kaigan, Minato-ku, Tokyo 108, Japan	+81-3-5442-4381	+81-3-5442-4391	Headquarters
IBJ-NIKKO INFORMATION SYSTEMS, LTD. (INIS)	IBJ-NIKKO INFORMATION SYSTEMS, LTD. (INIS)	3-7-1 Kanda-Nishiki-cho, Chiyoda-ku, Tokyo 101, Japan	+81-3-5281-1101		Headquarters
	Datastream International Limited	Monmouth House, 58-64 City Road, London EC1Y2AL, U.K.	+44-171-250-3000		Agent
	Thomson Financial Services Limited	Aldgate House, 33 Aldgate High Street, London EC3 N1AJ, U.K.	+44-171-815-3803		Agent
	Thomson Financial Services Database Group Inc.	Two Gateway Center, Newark, NJ 07102, U.S.A.	+1-201-622-3100		Agent
Information Services International Dentsu, Ltd. (ISID)	Information Services International Dentsu, Ltd.	4-11-10 Nakano, Nakano-ku, Tokyo 164, Japan	+81-3-3228-6111	+81-3-3319-6989	Headquarters
	ISI-Dentsu of America, Inc.	1114 Avenue of the Americas, New York, NY 10036, U.S.A.	+1-212-789-2300	+1-212-789-2333	Branch Office
	ISI-Dentsu of Asia, Ltd.	Suite 1001, Central Plaza, 18 Harbour Road, Wanchai, Hong Kong	+852-2829-0829	+852-2802-8477	Branch Office
	ISI-Dentsu of Europe, Ltd.	4th Floor, Imperial House, 15-19 Kingsway, London WC2 6UV, U.K.	+44-171-836-4666	+44-171-404-0392	Branch Office
	ISI-Dentsu Singapore, Pte. Ltd.	1 Raffles Place #52-01A, OUB Centre, Singapore	+65-538-3955	+65-538-4011	Branch Office

Company	Contacts	Address	Telephone	Facsimile	Status
Japan Association for International Chemical Information (JAICI)	FIZ Chemie GmbH	Franklinstrasse 11, D-10587 Berlin, Germany	+49-30-390-76	+49-30-390-76	Agent
	Japan Association for International Chemical Information	Nakai Bldg., 6-25-4 Hon-Komagome, Bunkyo-ku, Tokyo 113, Japan	+81-3-5978-3622	+81-3-5978-3600	Headquarters
	Kay Pool	9520 Linden Avenue, Bethesda, MD 20814, U.S.A.	+1-301-493-6595	+1-301-897-3487	Agent
	Korea Communications Engineering Co., Ltd.	16-60, 3-Ga, HangKang-Ro, Yongsan-ku, Seoul, Korea	+82-2-705-1597	+82-2-702-7206	Agent
Japan Audit Bureau of Circulations (JABC)	Japan Audit Bureau of Circulations	Shisei-Kaikan, 1-3 Hibiya-Koen, Chiyoda-ku, Tokyo 100, Japan	+81-3-3501-1491	+81-3-3501-1494	Headquarters
JAPAN CENTER FOR INTERCULTURAL COMMUNICATIONS (JCIC)	JAPAN CENTER FOR INTERCULTURAL COMMUNICATIONS	2-7-71 Hirakawa-cho, Chiyoda-ku, Tokyo 102, Japan	+81-3-3238-9111	+81-3-3238-9696	Headquarters
Japan External Trade Organization (JETRO)	Japan External Trade Organization	2-2-5 Toranomon, Minato-ku, Tokyo 105, Japan	+81-3-3582-5564	+81-3-3585-7499	Headquarters
Japan Patent Information Organization (JPIO)	European Patent Office (EPO)	Dienststelle Wien, Schottenfeldgasse 29, Postfach 82, A-1072 Wien, Austria	+43-1-521-26-307	+43-1-521-26-54-91	Partner
	Japan Patent Information Organization	Sato Dia Bldg., 4-1-7 Toyo, Koto-ku, Tokyo 135, Japan	+81-3-5690-5555	+81-3-5690-5566	Headquarters
	Knight-Ridder Information, Inc.	2440 El Camino Real, Mountain View, CA 94040, U.S.A.	+1-415-254-7000	+1-415-254-7070	Partner
	Orbit Questel, Inc.	8000 Westpark Drive, McLean, VA 22102, U.S.A.	+1-703-442-0900	+1-703-893-4632	Partner
	QUESTEL	Le Capitole 55, avenue des Champs Pierreux 92029 Nanterre Cedex, France	+33-1-46145576	+33-1-46145511	Partner
	STN INTERNATIONAL, c/o FIZ Karlsruhe	D-76344 Eggenstein- Leopoldshafen, Germany	+49-7247-808510	+49-7247-808131	Partner
Keizai Bunken Kenkyukai	Keizai Bunken Kenkyukai, c/o Keidanren Library	1-9-4 Ohtemachi, Chiyoda-ku, Tokyo 100, Japan	+81-3-3279-1411 (Ex.2813)	+81-3-5255-6256	Headquarters
Marketing Intelligence Corporation (MiC)	Marketing Intelligence Corporation	2-14-11 Yato-cho, Tanashi-shi, Tokyo 188, Japan	+81-424-23-1111		Headquarters
	Maritz Marketing Research, Inc.	1297 North Highway Drive/ Fenton, St. Lours County, MO 63099, U.S.A.	+1-314-827-1610	+1-314-827-3224	Branch

Company	Contacts	Address	Telephone	Facsimile	Status
Marketing Intelligence Corporation (MiC)	Nicholas Hall & Company	35 Alexandra Street, Southend on Sea, Essex SS1, IBW U.K.	+44-702-433-422	+44-702-430-787	Branch
MARUZEN CO., LTD.	MARUZEN CO., LTD.	2-3-10, Nihonbashi, Chuo-ku, Tokyo 103, Japan	+81-3-3271-6068	+81-3-3271-6082	Headquarters
	MARUZEN International Co., Ltd.	1200 Harbor Blvd., 10th Floor, Weehawken, NJ 07087, U.S.A.	+1-201-865-4400	+1-201-865-4845	Branch
Media Research Center, Inc.	Media Research Center, Inc.	Heiwado Building 5F, 2-4 Kanda Ogawamachi, Chiyoda-ku, Tokyo 101, Japan	+81-3-3219-7575	+81-3-3219-7377	Headquarters
METRO Inc.	ACTON DIRECT	P.O. Box 5059, Lincoln, NE 68505-0059, U.S.A.	+1-402-466-8400	+1-402-466-9074	Partner
	METRO Inc.	Tokai Bldg., 2-4-2 Nishi-Gotanda, Shinagawa-ku, Tokyo 141, Japan	+81-3-3490-5021	+81-3-3490-1069	Headquarters
National Diet Library (NDL)	National Diet Library (NDL)	1-10-1 Nagata-cho, Chiyoda-ku, Tokyo 100, Japan	+81-3-3581-2331 (Ex.2103)	+81-3-3597-5617	Headquarters
NEC Corporation (NEC)	NEC Corporation	5-7-1 Shiba, Minato-ku, Tokyo 108, Japan	+81-3-3798-9111	+81-3-3798-9170	Headquarters
New Glass Forum (NGF)	New Glass Forum	3-1-9 Shinbashi, Minato-ku, Tokyo 105, Japan	+81-3-3595-2775	+81-3-3595-0255	Headquarters
NHK JOHO NETWORK INC. (NHK-JN)	NHK JOHO NETWORK INC.	9-23 Kamiyama-cho, Shibuya-ku, Tokyo 150, Japan	+81-3-3481-1771	+81-3-3481-1777	Headquarters
Nichigai Associates, Inc.	Nichigai Associates, Inc.	Dai-3 Shimokawa Bldg., 1-23-8 Ohmorikita, Ohta-ku, Tokyo 143, Japan	+81-3-3763-5241	+81-3-3764-0845	Headquarters
NIFTY Corporation	CompuServe Inc.	5000 Arlington Center Boulevard, Columbus, OH 43220, U.S.A.	+1-614-457-8600	+1-614-457-0504	Agent
	Service Products Department, NIFTY Corporation	Ohmori Bell-Port A, 6-26-1, Minami-Ohi, Shinagawa-ku, Tokyo 140, Japan	+81-3-5471-5803	+81-3-5471-5890	Headquarters
	Overseas Information Service, POSDATA COMPANY, LTD.	2nd Floor Taehanjedang Bldg., 7-23, Shincheon-dong, Songpa-gu, Seoul, Korea	+82-2-411-1327	+82-2-441-1555	Partner
	Taiwan Telecommunication Network Services Co., Ltd. (TTN)	15th Floor, 120 Chien-Kuo, N. Road, Sec 2, Taipei, Taiwan, R.O.C.	+886-2-515-0330	+886-2-504-5593	Partner
Nihon Keizai Shimbun, Inc. (NIKKEI)	Dow Jones & Company, Inc.	200 Liberty St., New York, NY 10281, U.S.A.	+1-212-416-2667	+1-212-416-2720	Partner
	F.T. Business Enterprises, Ltd.	P.O. Box 12, Sunoury Middlesex, TW16 7UD, U.K.	+44-932-761444	+44-932-781425	Agent
	GENOIS Wirtschaftsdatenbanken	Postfach 1102 Kasernenstrasse 67, D-4000 Dusseldorf, Germany	+49-211-887-1534	+49-211-379-330	Agent

Company	Contacts	Address	Telephone	Facsimile	Status
Nihon Keizai Shimbun, Inc. (NIKKEI)	Nihon Keizai Shimbun America, Inc.	1325 Avenue of the Americas, Suite #2500, New York, NY 10019, U.S.A.	+1-212-261-6241	+1-212-261-6249	Branch
	Nihon Keizai Shimbun Europe, Ltd.	Bush House, Aldwych, London WC2B 4PJ, U.K.	+44-71-895-9107	+44-71-379-0378	Branch
	Nihon Keizai Shimbun Singapore Pte Ltd.	331 North Bridge Road, #13-02/03, Odeon Towers, Singapore 0718	+65-336-4122	+65-336-4016	Branch
	Nihon Keizai Shimbun, Inc.	1-9-5 Ohtemachi, Chiyoda-ku, Tokyo 100-66, Japan	+81-3-5294-2404	+81-3-5294-2413	Headquarters
	Nihon Keizai Shimbun, Hong Kong Ltd.	Suites 1707B-10, Dah Sing Financial Centre, 108 Gloucester Road, Wanchai, Hong Kong	+852-2598-1771	+852-2845-7768	Branch
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	WEFA, Inc.	401 City Avenue, Suite 300, Bala-Cynwyd, PA 19004, U.S.A.	+1-610-667-6000	+1-610-660-6477	Agent
	Nomura Research Institute America, Inc.	2 World Financial Center, Building B, New York, NY, U.S.A.	+1-212-667-9010	+1-212-667-1013	Branch
	Nomura Research Institute Europe Limited	Nomura House, 1, St Martin's-le-Grand, London, U.K.	+44-171-489-8710	+44-171-489-0032	Branch
	Haver Analytics	60 East 42nd Street, Suite 2424, New York, NY, U.S.A.	+1-212-986-9300	+1-212-986-5857	Agent
QUICK Corp.	QUICK AMERICA CORPORATION	Broad Financial Center, 33 Whitehall Street, New York, NY 10004, U.S.A.	+1-212-804-3000	+1-212-804-3107	Branch
	QUICK Corp. London Branch	65 Clifton Street, London EC2A 4JE, U.K.	+44-71-247-2222	+44-71-377-2201	Branch
	QUICK Corp.	Ohtemachi-Bldg., 1-6-1 Ohtemachi, Chiyoda-ku, Tokyo 100, Japan	+81-3-3216-5911	+81-3-3287-0836	Headquarters
	QUICK INFORMATION (H.K.) LIMITED	Room 1501-2, Sino Plaza, 255-257, Gloucester Road, Causeway Bay, Hong Kong	+852-2831-9888	+852-2831-9868	Branch
Research Institute of International Trade and Industry (RIITI)	Research Institute of International Trade and Industry	Kobiki-kan Ginza Bldg., 2-8-9 Ginza, Chuo-ku, Tokyo 104, Japan	+81-3-3535-5348	+81-3-3535-5347	Headquarters
Research Organization for Information Science & Technology (RIST)	Research Organization for Information Science & Technology	Shirakata-Shirane 2-4, Tokai-mura, Naka-gun, Ibaraki 319-11, Japan	+81-29-283-3833	+81-29-283-3811	Headquarters

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Software Development Co., Ltd. (SDC)	Software Development Co., Ltd.	3-8-12 Shibuya, Shibuya-ku, Tokyo 150, Japan	+81-3-3406-3711	+81-3-3406-6850	Headquarters
Technomics, Inc.	Technomics, Inc.	Nihonbashi TM Bldg., 1-8-11 Nihonbashi Horidome-cho, Chuo-ku, Tokyo 103, Japan	+81-3-3666-2952	+81-3-3666-2730	Headquarters
TEIKOKU DATABANK, LTD. (TDB)	TEIKOKU DATABANK, LTD.	2-5-20 Minami-Aoyama, Minato-ku, Tokyo 107, Japan	+81-3-3408-1108	+81-3-3404-4339	Headquarters
	TEIKOKU DATABANK AMERICA, INC.	750 Lexington Ave., 28th Fl., New York, NY 10022, U.S.A.	+1-212-486-2637	+1-212-486-2638	Branch
The Japan Information Center of Science and Technology (JICST)	Data Communications Corp. of Korea (DACOM)	DACOM Building 65-228, 3-Ga, Han Gang-Ro Yong San-Gu Seoul 140-716, Korea	+82-2-220-7273	+82-2-220-7219	Agent
	FIZ-Karlsruhe	P.O. Box 2465, W-7500 Karlsruhe 1, Germany	+49-7247-808-555	+49-7247-808-666	Agent
	Institut de l'Information Scientifique et Technique (INIST)	2, Allee du parc de Brabois, Vandoeuvre-Les Nancy, Codex 54514, France	+33-83-50-46-80	+33-83-50-46-83	Agent
	JICST Paris Office	c/o CNRS 27, rue Damesme, 75013 Paris, France	+33-1-4581-1077	+33-1-4581-1196	Branch
	JICST Washington Office	Suite 1050, 1550 M Street, N.W., Washington, D.C. 20005, U.S.A.	+1-202-872-6370	+1-202-872-6372	Branch
	National Technical Information Service (NTIS)	5285 Port Royal Road, Springfield, VA 22161, U.S.A.	+1-703-487-4822	+1-703-321-8547	Agent
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Tokyo Shoko Research, Ltd. (TSR)	Dun & Brad Street Information Services	One Diamond Hill Road, Murray Hill, NJ 07974, U.S.A.	+1-908-665-5104		Agent
	Tokyo Shoko Research, Ltd.	1-9-6 Shinbashi, Minato-ku, Tokyo 105, Japan	+81-3-3574-2268	+81-3-3574-2224	Headquarters
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	TOYO KEIZAI AMERICA INC.	380 Lexington Ave., 45th Fl., New York, NY 10168, U.S.A.	+1-212-949-6737	+1-212-949-6648	Branch
USACO Corporation (USACO)	USACO Corporation	1-13-12 Shinbashi, Minato-ku, Tokyo 105, Japan	+81-3-3502-6471	+81-3-3593-2709	Headquarters





This work was subsidized by the Japan Keirin Association  
through its Promotion funds from KEIRIN RACE.



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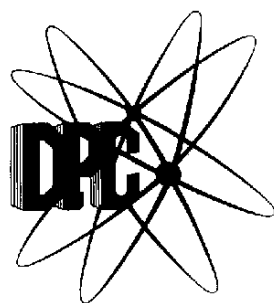
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