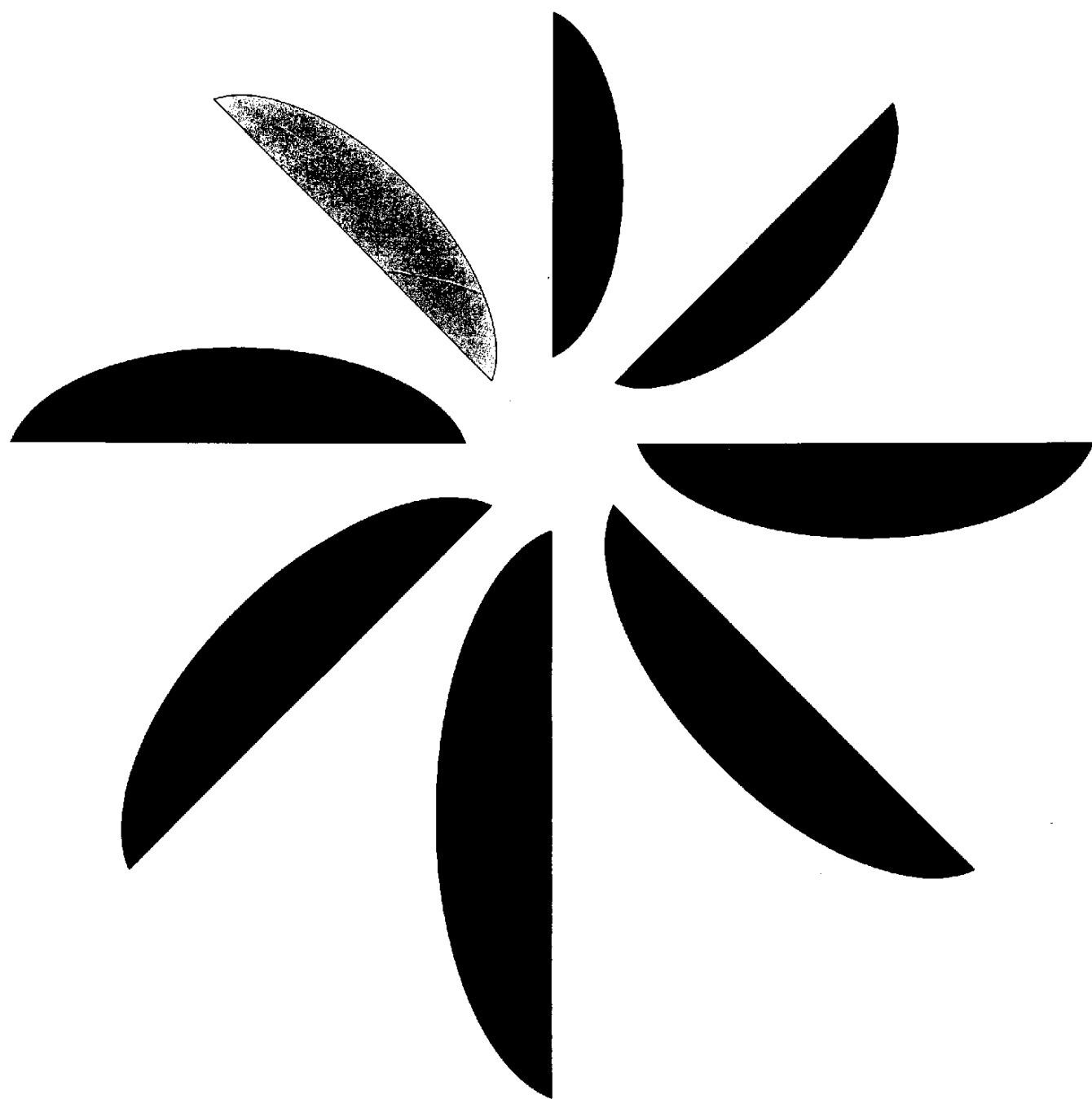


Databases in Japan

1996

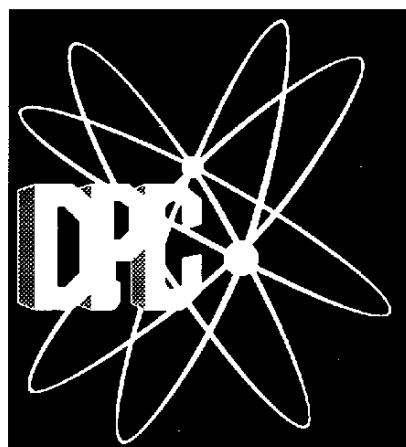


Database Promotion Center, Japan

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 1996



Database Promotion Center, Japan

CONTENTS

I Present State of Database

1. Crisis Management and Databases	1
2. Supply Status of Commercial Databases	2
3. Databases and Intellectual Property Rights	3
4. Changes in the Individual Information Environment	5
5. Promotion of Electronic Commercial Transactions	6
6. The Internet as Giant Databases	7
7. Government Informatization and Databases	8

II Trends in the Database Service Market

1. Size of the Database Market	11
1.1 Database Sales	11
2. Distribution of Commercial Databases	13
2.1 Number of Databases Breaks the 3,000 Mark	13
2.2 Status by Category	14
3. Comparison of Database Conditions in the United States and Japan	18
3.1 Comparison of Database Industry Strength	18
3.2 Comparison of the States of Database Distribution	19

III Trends in the Database Service Industry

1. Positioning of Database Services	21
2. Sales of Database Services	21
2.1 Ratio of Database Sales to Company Gross Sales	22
2.2 Ratio of Japanese Database Sales to Total Sales	22

2.3	Database Sales Ratio by Supply Form	23
2.4	Growth Rate of Database Sales	23
2.5	Estimated Growth Rate of Future Database Sales (Company Level)	24
2.6	Estimated Growth Rate of Future Database Sales (Industry Level)	24
3.	Media with the Highest Expectations	25
3.1	Media with the Highest Expectations	25
3.2	Predicted Growth Rates	26
4.	Distribution of Databases	27
5.	Problems in Database Construction	28
6.	Utilization of Public Data	28
7.	Types of Data (Text, Image, Video, etc.)	30
7.1	Data Currently Being Supplied	30
7.2	Data Scheduled to be Supplied in the Future	31
7.3	Positioning of Image and Video Data	32
8.	Database Supply by CD-ROM	33
8.1	Status of CD-ROM Database Supply	33
8.2	Categories of CD-ROM Databases	33
9.	Internet Utilization	35
9.1	Internet Utilization Status and Reasons	35
9.2	Concerns and Problems with Using the Internet	36
10.	Present State of Overseas Database Supply	37

IV Present State of Use of Commercial Databases

1.	Summary	39
2.	Usage Results and Forecasts	39
3.	Types and Contents of Frequently Used Commercial Databases	41
3.1	Frequently Used Systems and Databases	41
3.2	Categories of Frequently Used Databases	46
3.3	Types of Data Desired to be Used	47
3.4	Types of Data Used	48

3.5 Utilization of Public Data	48
4. Rates of Database Utilization Forms	50
5. Issues on Pricing and Utilization	51
5.1 Pricing Issues	51
5.2 Impressions of Recorded Information	51
5.3 Problems with Commands, Functions and Operability	51
6. Database Utilization by Personal Computer Network Services	52
7. Utilization of the Internet	53
8. Questions Relating to CD-ROM	55
8.1 Utilization of Information on CD-ROM	55
8.2 Categories of Information Use	56
8.3 Currently Used CD-ROM Software	56

V State of Personal and Home Utilization

1. Summary	59
2. Trends of Personal Utilization	59
2.1 Slight Decrease in the Proportion of Personal Use	59
2.2 Utilization Time at 18 Minutes per Week	60
2.3 CD-ROM Moves Up to 2nd Place	60
2.4 CD/Video Information Ranked in the Top Three	60
2.5 Secondary Information Occupies Upper Ranks	63
3. Requests to Commercial Databases	65
4. State of Utilization of the Internet	65
4.1 Rapid Increase in the Number of Internet Users	65
4.2 Increased Usage Primarily from Personal Use	66
4.3 Concern Over Security	67

VI Project for Promoting Administrative Informatization of the Government

1. Promotion of Administrative Informatization	69
2. Joint Projects and Progress Status	70

2.1	Establishment of Information Systems	68
2.2	Sophistication of Administrative Services	69
2.3	Sophistication of Information Systems	73
3.	Overview and Implementation Status at Individual Ministries and Agencies	74
3.1	Management and Coordination Agency	74
3.2	Science and Technology Agency	75
3.3	Ministry of Posts and Telecommunications	76
3.4	Ministry of Construction	76
4.	Present State of Information Supply by Government Agencies	77

LIST OF FIGURES

Figure	Page
I-1 Changes in the Number of PC Network Subscribers	6
I-2 EDGAR Screen	9
I-3 FedWorld Screen	9
II-1 Changes in Annual Sales of the Database Service Industry	12
II-2 Changes in the Number of Databases Accessible in Japan (Based on Actual Numbers)	13
II-3 Graphical Comparison of Database Conditions in the United States and Japan (1994)	20
III-1 Positioning of Database Services	21
III-2 Distribution of the Ratio of Database Sales to Company Gross Sales	22
III-3 Ratio of Database Sales by Supply Form	23
III-4 Distribution of Year-on-Year Changes in Database Sales	24
III-5 Distribution of Estimated Annual Average Growth Rate of Database Sales over Five Years (Company Level)	24
III-6 Distribution of Estimated Annual Average Growth Rate of Database Sales over Five Years (Industry Level)	25
III-7 Media Expected to Demonstrate the Highest Growth over the Next Five Years (N=113: multiple replies)	26
III-8 Annual Average Growth Rates of Media Expected to Demonstrate the Highest Growth over the Next Five Years (Forecast)	27
III-9 Problems in Database Construction (N=78: multiple replies)	28
III-10 Reasons for Using Public Data (N=41: multiple replies)	29
III-11 Currently Used Public Data (N=38: multiple replies)	29
III-12 Types of Data Currently Supplied On-Line (N=68: multiple replies)	30
III-13 Types of Data Currently Being Supplied Off-Line (N=61: multiple replies)	31
III-14 Types of Data Desired to be Supplied (or Desired to be Expanded) On-Line (N=60: multiple replies)	32
III-15 Types of Data Desired to be Supplied (or Desired to be Expanded) Off-Line (N=49: multiple replies)	32
III-16 Proportion of Companies Supplying Databases by CD-ROM	33
III-17 Implementation Status of Database Services via the Internet (N=95)	35

III-18	Reasons for Implementing or Planning to Provide Database Services via the Internet (N=35: multiple replies)	36
III-19	Concerns and Problems Relating to Internet Use (N=32: multiple replies)	36
III-20	Growth of the Number of Databases Supplied Overseas	38
IV-1	Categories of Frequently Used Databases (multiple replies)	46
IV-2	Information Categories Frequently Used on CD-ROM (N=180: multiple replies)	56
V-1	Categories of Frequently Used Databases (Percentages with respect to total no. of replies)	61
V-2	Categories Desired to be Used (Ratio with respect to total no. of replies: 6,979)	64
V-3	Purpose of Internet Utilization (No. of replies: 2,908)	66
V-4	Services Used with Internet (Ratio with respect to total no. of replies: 6,096)	67
VI-1	Home Page of the Prime Minister's Official Residence	77
VI-2	Home Page of the Science and Technology Agency	78
VI-3	Home Page of the Economic Planning Agency	79
VI-4	Home Page of the National Land Agency	80
VI-5	Home Page of the Ministry of Foreign Affairs	81
VI-6	Home Page of the MITI	82
VI-7	Home Page of the Ministry of Posts and Telecommunications	83

LIST OF TABLES

Table	Page
II-1 Annual Sales by Various Information Service Sectors	12
II-2 Distribution by Category of Databases Accessible in Japan (Number of Databases)...	16
II-3 Comparison between U.S. and Japanese Databases (1994)	19
III-1 Supply Status of CD-ROM Databases (No. of companies)	34
III-2 Number of Domestic Databases being Supplied Overseas	37
IV-1 Annual Average Monetary Amount of Database Usage per Company by Company Size	40
IV-2 Frequently Used Systems on a Monetary Basis in Order of the Number of Replies (N=428: multiple replies) (Aggregate of the top five systems on a monetary basis of each replying company)	41

IV-3	Databases with High Utilization Frequency (N=457: multiple replies)	42
IV-4	Ranking of On-Line Information Service Companies (Including Distributors) by No. of Contracted Users	44
IV-5	Types of Data Desired to be Used	47
IV-6	Types of Data Currently Being Used or for Which Use is Desired to be Increased in the Future (multiple replies)	48
IV-7	Utilization of Databases Handling Public Data	49
IV-8	Database Utilization Rates	50
IV-9	Frequency of Use of Personal Computer Network Service Menus (multiple replies) ..	52
IV-10	Purposes of Using the Internet (multiple replies)	54
IV-11	Merits of Internet	54
IV-12	Problems Concerning Internet Utilization	55
IV-13	Currently Used CD-ROM Software (N=134: multiple replies)	57
V-1	Frequently Used Databases (multiple replies)	63

Appendix

Table 1	Japanese Database Accessible Overseas (1996:Producers)	85
Table 2	Japanese Databases Accessible Overseas (1996:Distributors/Agents)	96
Table 3	Japanese Database being Planned for Overseas (1996)	114
Table 4	Address of Overseas Service Points (1996:Producers/Distributors)	115

I Present State of Database

1. Crisis Management and Databases

Various issues surrounding databases were discussed following the Great Hanshin Earthquake. These issues ranged from aspects of information issues relating to national security to the durability of hardware, including host computers and personal computers, during an earthquake, problems confronting information systems, weaknesses of communication networks and data security, indicating issues that affect the government, private corporations and homes.

Following the Great Hanshin Earthquake, information that was immediately required by numerous people was that relating to the safety and whereabouts of family members, acquaintances and friends. In the case of private corporations, this consisted of information relating to the safety and whereabouts of employees and clients. Means adopted for confirming safety consisted nearly exclusively of the telephone. Due to telephone lines going out of service and the large volume of communication traffic overwhelming the remaining lines, a considerable amount of time was required to confirm safety and whereabouts of missing persons. As a result, PC networks proved to be extremely useful at that time. Unlike telephones, once a message is sent using a PC network, the receiving party is able to view the message when it is convenient. As a result, people were able to take full advantage of this characteristic of PC networks. If a person would place information such as "I am okay" on an electronic bulletin board, concerned persons would be able to confirm his or her safety by seeing that message.

In other words, this is none other than a database for gathering information on the whereabouts and well-being of people. Since the information placed on the bulletin board varies in format and content, it might be said that it is not possible to find the desired information immediately. In the case of well-being information, however, all that is required at the very minimum is a name, whereabouts and where to direct correspondence. Persons desiring to confirm the well-being of a person should search for that person using his or her name. It is thought that a well-being database containing the minimum necessary information and equipped with simple search functions should be established as a nationwide system so that it can be implemented during emergencies. Entry of information could be made directly by going to the relevant government office or by sending in information to a government office such as a city hall. This could be made even more convenient by accepting information sent to a predetermined address using a PC network.

In terms of government involvement, active utilization of map information should probably be considered most seriously. It goes without saying that the layout status of potentially dangerous objects, such as oil tanks, the status of buildings for which there is the risk of collapse in terms of how many years have elapsed since they were built, and information on underground facilities

such as gas lines and water pipes would be necessary. In the case of rescue operations, roadway information would also be required, such as which roads are blocked by fallen buildings and so forth. By continuously plotting information on collapsed buildings on a map, it would be possible to determine at a glance which roads can be used by emergency vehicles involved in rescue operations and fire extinguishing work. In determining damage status, placing damage information on a map would enable instantaneous determination of the situation.

It would be even more important to also place information containing a list of residents on the map. Since information on residents moving into and from an area is maintained by government agencies, it would be easy to correlate individual buildings on the map with the residents that live there. This map resident database would have to be maintained so as to be updated at all times. Updating the information once every three months or twice a year would not be of any use. This is because an earthquake may occur at any time. Although it may be considered a difficult task to maintain information in the most recent form, this is really not the case. Basically, if the use of computers at the administrative level is sufficiently advanced, it ought to be able to accommodate this situation. If notifications filed by residents leaving or moving into an area are processed by computer, the resident database can be updated immediately. This becomes even easier if notifications of moving from or into an area are collected at a single location. With respect to the movement of buildings, such as the construction or removal of buildings, map information can be maintained in its most up-to-date form by utilizing information from satellites.

With respect to in-house databases operated by private corporations, the item of the greatest interest has become how to maintain the integrity of the data. Those facilities that were exposed to the greatest fragility at the time of the Great Hanshin Earthquake were those facilities in which data was centrally controlled at a single location. Situations occurred in which, even though the tapes or disks that contained the database were not physically damaged, the database could not be used for reasons such as the computer room being damaged, which prevented their use, machines being inoperable as a result of not being able to use cooling water due to broken water lines, or buildings impossible be entered due to excessive danger. Thus, there were many situations in which, even though the data itself was not damaged in any way, it was unable to be used, thus strongly indicating the need for two-fold management of data.

2. Supply Status of Commercial Databases

The following provides an overview of the state of commercial databases as of 1995 according to the results of two recent MITI surveys, namely the 1996 edition of the "Database Directory" and the "Survey of Selected Service Industries".

The total number of domestic and overseas databases that can be accessed in Japan exceeded the 3,000 level for the first time, at 3,061. This represents an increase of 81 databases from the level of 2,980 of the previous year, and a growth rate of 2.7%. There are 1,048 domestic databases

(up 4.1% from the previous year) and 2,013 overseas databases (up 2.0%).

Overseas databases still continue to outnumber domestic databases by roughly 2:1.

In looking at these databases by category, the largest number of databases is in the business category, at 1,160, accounting for 37.9% of the total. There are 927 databases in the general category, 819 in the natural science and technology category, and 94 in the humanities category. The remaining 61 databases are in the "other" category. There are two categories that demonstrated increases in their composite ratios from the previous year: namely the business category, which includes corporate finance and profiles, and finance, securities and foreign exchange information; and the general category, which includes information on newspapers, journals and news, and who's who and organization information. Conversely, the natural science and technology category as well as the humanities category demonstrated decreases in their composite ratios.

The natural science and technology category, in particular, has exhibited a decreasing trend over the past several years.

In looking at this trend in numerical terms, although the number of databases increased by more than 700 overall from 1990 to 1994, the number of databases in the natural science and technology category increased by only 81. There is therefore a need for more databases in basic research fields.

According to the findings of the "Survey of Selected Service Industries", sales of the database industry in 1994 fell below the ¥200 billion level, at ¥198.8 billion, representing a decrease of 6% from the previous year.

This also represents the third consecutive year in which sales have fallen below the level of the previous year, following the decreases of 0.9% in 1992 and 1.2% in 1993. Although various topics have recently been brought up concerning information utilization, such as multimedia and Internet, and databases in particular have come to be referred to as the infrastructure of an information society, the market has not grown as had been previously anticipated.

However, the sluggishness observed over the past three years appears to be coming to an end. When database utilization in 1994 is divided between on-line use and off-line use, in contrast to sales of on-line services totaling ¥150.7 billion, corresponding to a decrease of 8.3% from the previous year, sales of off-line services totaled ¥48.2 billion, representing an increase of 2.3%.

3. Databases and Intellectual Property Rights

Accompanying the recent proliferation of digital devices, discussions are being actively conducted in various locations concerning intellectual property rights. The purport of protecting intellectual property rights is to protect creative works produced as a result of intellectual enterprises from copying by others, and to protect their property rights. If other persons were allowed to copy such works and use them without restriction, no one would attempt to carry out

creative activities. As the digital application of information continues to progress, it is beginning to appear that this protection will become increasingly difficult. One reason for this is that it is easier to copy digital information than analog information. What is more, the information does not deteriorate. Another reason is that due to the proliferation of information networks, even individuals can easily transmit information and exchange information with locations throughout the world. On the other hand, however, there is also considerable activity in the area of using digital information to create new information in the manner of multimedia. From the standpoint of the user of digital information, if protection is enforced too severely, use of information becomes restricted, which can conversely have the effect of stifling the desire to create.

This issue of copyrighting digital information has been discussed by the Agency for Cultural Affairs and several other organizations, the results of which have been summarized into a report. The Agency for Cultural Affairs prepared a summary of problems regarding amendment of the Copyright Act in February 1995, and called upon agencies and institutions to present their opinions. In addition, discussions were also held at the "Copyright Liaison Council on Multimedia Issues", the members of which are holders of copyrights, and the "Multimedia Producers Liaison Council", an organization for users of multimedia, and opinions were exchanged between the groups. In June at the Intellectual Properties Institute, a summary was prepared entitled, "Survey and Research Relating to Intellectual Property Right Rules Required for Realizing a Multimedia Society". This summary worked out the idea for a digital information center for promoting the distribution of digital works. In addition, issues pertaining to intellectual property rights were discussed by 11 private organizations closely related to the state of intellectual property rights that accommodate digital and network applications. Those discussions were summarized in a report entitled, "Issues Concerning Intellectual Property Rights Accommodating Digital and Network Applications". One of the topics taken up in that report directly relating to databases involves the manner by which so-called databases not protected by the Copyright Act should be protected.

Databases first became protected by the Copyright Act as copyrighted works in 1986. If the arrangement of data, manner of its collection, coding of key words, manner of retrieval and so forth are recognized as being creative, databases are treated as copyrighted works irrespective of the data contained in the database. However, recognizing telephone book databases arranged in alphabetical order or databases simply involving the collection of data that is inherently not copyrighted as having creativity is considered to be a problem. In the United States, for example, databases like telephone books, in which data is arranged in alphabetical order are not recognized as having creativity. Precedent has been set whereby these databases are not protected by copyright laws. This situation gives rise to the problem of how these databases that lack creativity should be protected.

A vast amount of time, labor and funding is required to create a database. Even though a particular database may not be recognized to have creativity, the person attempting to create such

a database would have no incentive to do so if nothing could be done in the event that database were copied. It is therefore clear that even these types of databases require some form of protection. This same report points out that: a) the present state of protection in Japan has the possibility of being considered to be a problem internationally at any time, and b) there is a strong possibility the limited nature of protection afforded by current copyright laws will become clear in the future. The report also states that it is desirable to implement some form of legal measures regarding acts of extracting and/or reusing data from databases while taking international trends into careful consideration. In view of the present situation, in which the entire world is connected by some form of network, this problem cannot likely be solved by a single country, but rather should be resolved based on the cooperation of each country.

4. Changes in the Individual Information Environment

In 1995, annual sales of personal computers in Japan surpassed the 5.7 million mark. The volume of sales was so dramatic that this period was referred to as a "personal computer boom". Topics and materials that promoted the use of personal computers by individuals suddenly abounded, including the release of "Windows '95", the proliferation of the Internet, the growing use of personal computer network services and the release of a wide range of CD-ROM titles. In addition to personal computers, there was also an amazing proliferation of information-related devices, including PDAs (Portable Data Terminals) and PHS (Personal Handyphone System). As a result, the information environment surrounding individuals underwent a significant change during this past year.

The number of subscribers to personal computer network services in Japan reached 3.69 million as of June 1995, increasing by 1.09 million subscribers in comparison with June 1994 (Fig. I-1). The growth trend has showed no signs of letting up due to the falling prices of modems and the wider range of services offered. Although the major objectives of using personal computer network services are electronic billboards and electronic mail, there has recently been an increase in the amount of database use. According to the "Survey of Individual and Home Database Use" conducted by the Database Promotion Center and targeted at users of personal computer network services, the number of people who had used databases in the past increased by more than 60%, while the number of people who used those databases via personal computer networks accounted for 92.7%.

With respect to the use of databases by individuals, use in the past centered on working at home. At present, however, there are a considerable number of individuals using databases at home for other purposes. The number of persons using databases for reasons other than their jobs exceeds 40%. Thus, database categories that are used by individuals are also moving from business information categories, such as corporate profiles and economic information, to categories such as book information, travel and leisure information and CD/video information. In

addition, not only on-line, but also off-line database use by CD-ROM is also increasing. The need for information in these categories is expected to continue to increase in the future, and will most likely require suppliers to make efforts to expand the range of services offered.

Internet use is also on the increase, rising steadily due to greater ease of access through personal computer network services and providers and to the release of browser software products that make the Internet easier to use. The number of Internet users throughout the world has been estimated at more than 50 million. According to the above survey, the number of individual and home database users that have used the Internet in some form in Japan has reached 50%. In addition, when users were asked about the purpose for using the Internet, electronic mail was the most common reply. This was followed by information gathering. This means that users consider the Internet to be a single database that enables them to search for and gather information. This gives the impression that individuals using databases to gather information has become commonplace, and databases themselves are becoming quite familiar to these users.

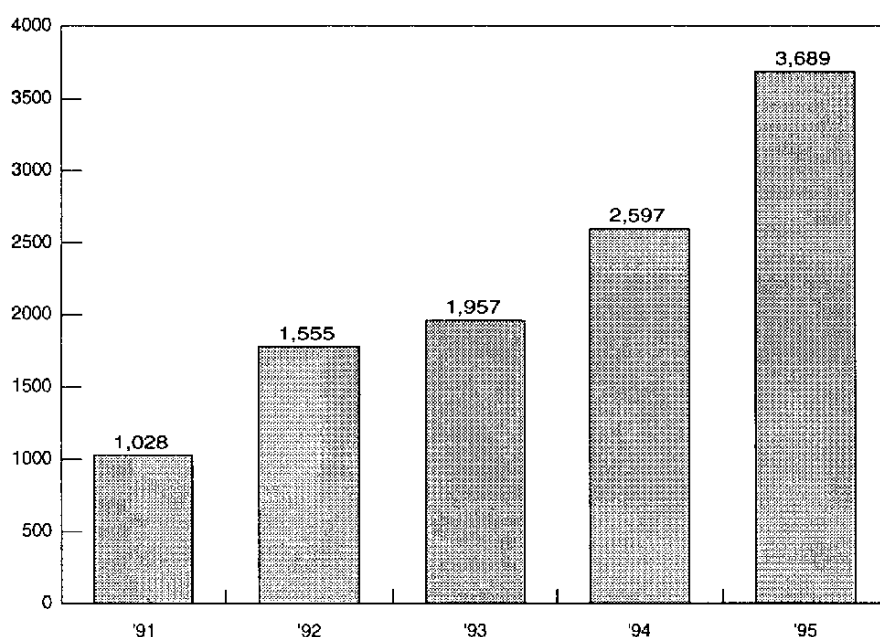


Figure I-1 Changes in the Number of PC Network Subscribers

Source: Prepared from the "1995 Nationwide PC Network Survey", New Media Development Association

5. Promotion of Electronic Commercial Transactions

Significant progress is being made in the area of electronic commercial transactions (EC). However, there are still many problems that remain to be solved, including those relating to security, in order to realize electronic transactions such as CALS and EDI.

The key to proceeding with EC is the extent to which information sharing is incorporated into

those efforts. Instead of in-house databases of private corporations being available for use only in specific departments, information will have to be accessible throughout the entire company, going between different departments in order to lead to improved efficiency of operations. Only when databases spread throughout industry, so that information is mutually available between corporations, resulting in a sharing of information, will EC become valid. The "Electronic Commercial Transaction Demonstration and Promotion Association" was established in January 1996, followed by the commencement of demonstration experiments with the aim of achieving practical application of electronic commercial transactions using personal computer networks. Approximately 100 companies are participating in these experiments, and the total number of companies is ultimately expected to reach around 350.

6. The Internet as Giant Databases

The number of persons using the Internet is continuing to grow. It is only natural, then, that if those persons using the Internet increase, the people supplying information to those users will also increase correspondingly. In terms of the Internet, since users that receive information are simultaneously also users that transmit information, it can theoretically be assumed that the amount of information transmitted is equal to the number of users. It is for this reason that new home pages are opened every day and news services (electronic bulletin boards) are providing large volumes of information. It has also become extremely easy to retrieve information on the Internet by the use of easy-to-use browsers. At present, the Internet can be said to have evolved into a giant database.

There is concern, however, that the appearance on the scene of this giant database, will create a serious threat to the database industry. This concern is over the lowering of prices of information charges. Nearly all information on the Internet is provided free of charge. For example, when desiring to find out about a company profile, you can find that information simply by looking at the home page provided by that company. The current times are such that even primary information, such as newspaper and television news, government statistics and so forth, can be acquired without having to go through a database firm. Although it is a fact that information provided free of charge frequently tends to be unreliable, it is also a fact that this type of information service is satisfying demand to a certain extent.

When private corporations and individuals using the Internet were asked the purpose for their use, the reply "acquiring information from home pages" ranked 2nd among corporations and 1st among individuals ("Survey of Japanese Database Services (User Edition)", Database Promotion Center). As can also be seen from these results, a considerable number of people are using the Internet as one way of gathering information. In the category of providing primary information as one example of this, the sphere of activity of database firms is becoming smaller. In view of this reduction in market size, database firms are being forced to implement some form of

countermeasures to ensure the viability of the database industry.

7. Government Informatization and Databases

Full-scale efforts to implement informatization of the government began in 1995 as the first year of the "Basic Project for the Promotion of Government Informatization", a five-year project implemented in Japan. According to this project, as a result of computerizing information covering the various aspects of government operations, in addition to distributing information not only to government agencies but also throughout society as necessary, citizens will be able to electronically apply for various types of applications and notifications including tax forms and change of residence notifications. Documents will be able to be processed at a single location, without having to go around to several departments. What is more, it will no longer be only a dream to file notifications from the comfort of home using electronic mail. As a result of digital information traveling back and forth between the government and private sectors, waste in the form of lost time and duplicated procedures will be eliminated. Government informatization will enable the efficiency of society as a whole to be improved. In this sense, informatization of the government will serve as an impetus to informatization of the entire country.

As government informatization proceeds, however, the private database industry will be confronted with a serious problem. Electronic information will increasingly be supplied from the government to the private sector. This information will include printed matter, such as government reports and white papers, reports and reference materials used by various committees, new laws and the contents of speeches and examinations made by the prime minister in the National Diet as well as a wide variety of other information. This is the reason for the serious problem. Although statistical information and information on securities reports are currently provided by database firms for a fee, if these were to be provided free of charge as a service of the government, there would be a dramatic drop in the number of persons desiring to obtain that information from private databases. Thus, there is the risk of the government putting pressure on private industry. This type of situation has already occurred in the United States. The EDGAR (Electronic Data Gathering Analysis and Retrieval) system of the Securities and Exchange Commission (SEC) and FedWorld, a government service for providing information, are introduced here as two examples of this.

EDGAR (Fig. I-2) is a computerized data gathering, analysis and retrieval system that was brought about as a result of the SEC's obligation to electronically provide financial and corporate information to all listed companies in the United States. The SEC began providing this corporate information free of charge on the Internet in the fall of 1995. However, since the effect of private vendors providing the same information service would be significant if information was continued to be provided in that manner, the information provided consists only of that in the form of original reports submitted by each company. There are no indexes provided and the data is not



Figure I-2 EDGAR Screen

organized. In addition, reports are disclosed at least 24 hours after they are reported. Since private vendors are providing information for a fee that is in a form that can be compared with other vendors, while also being legible and well organized, the government service is able to be segregated from services provided by commercial vendors.

U.S. government agencies are reported to have nearly 700 sites on the Internet, and new sites are appearing on a weekly basis. FedWorld covers all of these government agencies (Fig. I-3).

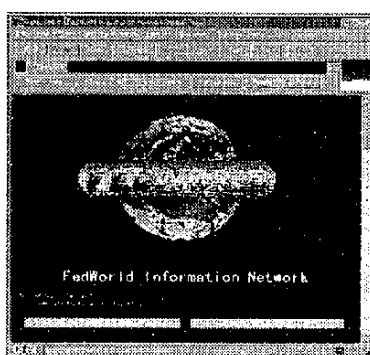


Figure I-3 FedWorld Screen

Whether it be EDGAR that has managed to segregate itself from commercial databases, or FedWorld, information can be obtained free of charge. The problem that results from this is the effect it will have on the fate of database vendors providing database services containing this government information for a fee. Government informatization in the United States has progressed considerably more than in Japan. It may therefore be some time before Japan is confronted with a similar problem. However, it is certain that a problem similar to this will occur in Japan as government informatization continues to progress. Incidentally, according to the "Report of the Survey Group on Use of Information Provided by the U.S. Government" compiled in March 1996 by the Data Promotion Center, cases are introduced that describe private firms in the U.S. segregating themselves from government database services by reformatting or improving the ease of use of government information provided for a fee by these private vendors.

II Trends in the Database Service Market

1. Size of the Database Market

1.1 Database Sales

Database services are positioned as an important business among information services. According to the "Survey of Selected Service Industries", a compilation of selected statistics issued by the Ministry of International Trade and Industry (MITI), the leading businesses in the information service industry included (1) software (ordered software and packaged software), (2) data processing services (on-line, off-line and sales of machine time, etc.), and (3) databases.

According to the 1994 edition of this same survey, sales for the entire information service industry totaled ¥6.177 trillion, down 5.2% from the previous year. During the 70's and 80's, sales of the information service industry tripled in the span of five years, growing at a tremendous pace and giving it the reputation of being unaffected by economic recession. However, that growth has not yet been able to overcome the current business slump. The impact of this recession can be dramatically seen in sales figures for the industry. In other words, although sales of this market peaked at ¥7.1276 trillion in 1992, in 1993 sales decreased for the first time in the 20 years since this survey was begun (1973), dropping by 8.6% from the previous year. The results of the most recent survey indicate that this decrease has continued for two consecutive years.

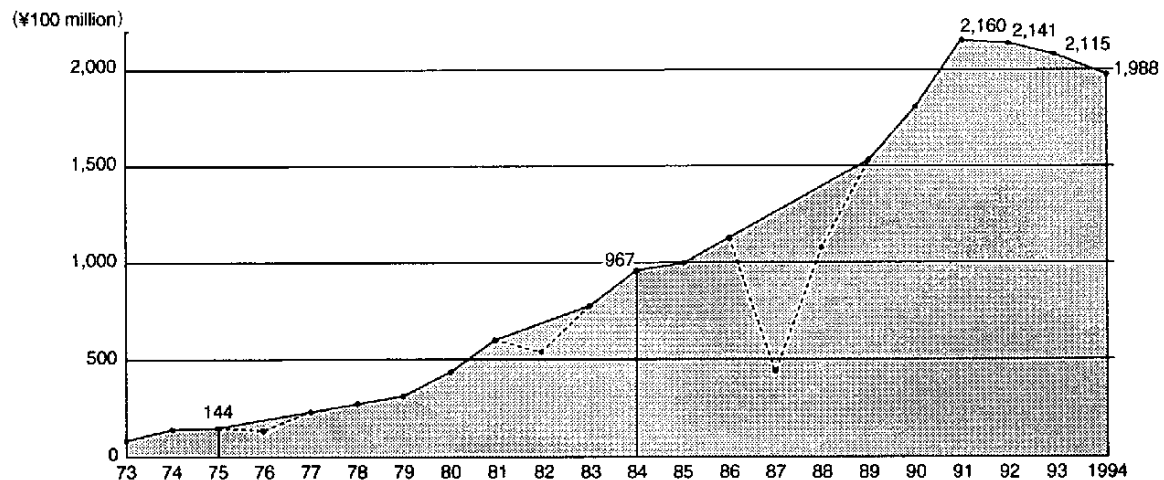
In looking at sales figures for individual types of services, sluggishness in the area of "software development programming" significantly contributed to reduced sales. Although sales from these services were ¥4.2959 trillion in 1992, figures dropped consecutively in 1993 (¥3.8133 trillion) and 1994 (¥3.4858 trillion). Since this sector accounts for nearly 60% of all sales of the information service industry, the effects of these decreases naturally caused a reduction in the size of the overall industry (Table II-1).

What, then, is the situation for the database service industry? Although there are some aspects that do not always agree with business trends due in part to restrictions on coverage of surveyed corporations in the statistics, sales decreased for the third consecutive year, including the figures obtained in the most recent survey. Although sales from this sector broke the ¥200 billion mark in 1991, recording sales of ¥216 billion, sales to ¥214.1 billion in 1992, to ¥211.5 in 1993 and further to ¥198.8 billion as of the most recent survey (Fig. II-1).

Table II-1 Annual Sales by Various Information Service Sectors

Classification	1993			1994		
	Annual sales (¥ billion)	Ratio(%)	Change from the previous year(%)	Annual sales (¥ billion)	Ratio(%)	Change from the previous year(%)
Total	65,144	100.0	-8.6	61,770	100.0	-5.2
On-line and off-line data processing	10,082	15.5	-8.4	9,660	15.6	-4.2
Software development and programming	38,133	58.5	-11.2	34,858	56.4	-8.6
Key punching and data entry	1,914	2.9	-4.9	1,843	3.0	-3.7
Machine time sales	433	0.7	-8.3	332	0.5	-23.4
Facility management services	3,591	5.5	-1.2	3,585	5.8	-0.2
Database service	2,115	3.2	-1.2	1,988	3.2	-6.0
Various types of research	2,484	3.8	-10.7	2,476	4.0	-0.0
Miscellaneous services	6,392	9.8	1.7	7,028	11.4	10.0

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



(Units : ¥100 million)

1973	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94
76	130	144	121	238	271	316	441	607	523	787	967	1,008	1,143	432	1,063	1,576	1,886	2,160	2,141	2,115	1,988

Figure II-1 Changes 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. Distribution of Commercial Databases

2.1 Number of Databases Breaks the 3,000 Mark

According to the results of the 1994 edition of the "Database Directory" issued by MITI, the number of commercial databases that can be accessed in Japan broke the 3,000 mark for the first time in 1994 at 3,061 (based on actual numbers). Furthermore, the databases counted in the survey were limited to commercial databases. In other words, anyone can access a database if they pay the required fee.

The Database Directory has been issued once a year since 1982. It serves as a guidebook that introduces databases available in Japan from various viewpoints, including category, supply form and vendor.

Ever since the number of databases available in Japan broke the 1,000 mark in 1993, it has continued to grow steadily, reaching 1,048 according to the findings of the most recent survey. The proportion of these databases to the total number of databases has also increased slightly, from 33.8% in 1993 to the present level of 34.2%. Furthermore, compared with figures from 10 years ago in 1984, although the total number of databases has increased 3.3 times, the number of domestic databases has increased 5.3 times (Fig. II-2).

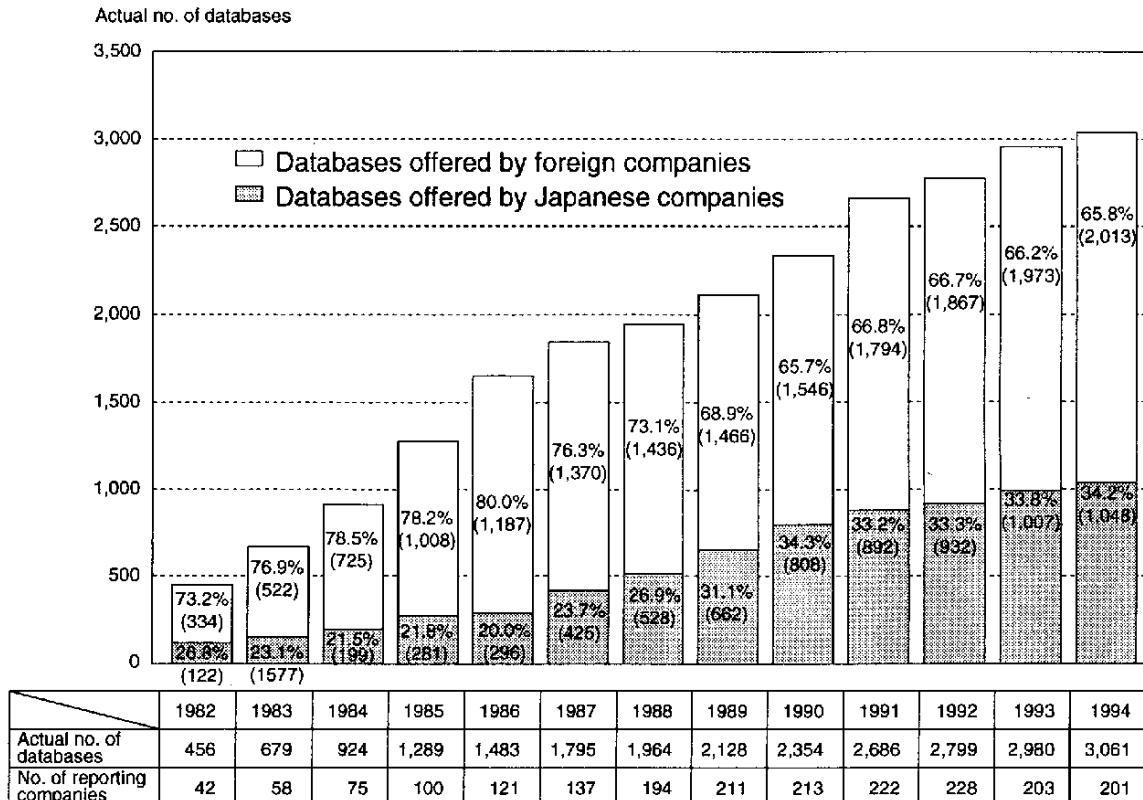


Figure II-2 Changes in the Number of Databases Accessible in Japan
 (Based on Actual Numbers)

Source: Prepared from the "Database Directory," MITI

There were 201 firms that reported results to the Database Directory (1994 edition). In looking at the business types of these firms, the most common type was "producers/vendors", accounting for 74 of the reporting firms (36.8%). Other major business types included "producers" (22 firms), "vendors" (13 firms) and "information brokers" (40 firms). Thus, the large number of "producers/vendors" is characteristic of the business types found in Japan.

2.2 Status by Category

Databases distributed in Japan are classified by category. Those categories consist of (1) General (927, 30.3%), (2) Natural Science and Technology (819, 26.8%), (3) Humanities (94, 3.1%), (4) Business (1160, 37.9%) and (5) Other (61, 1.9%).

The only category in which the number of databases has consistently increased is the "General" category. Even when only looking back over the past five years, the growth rate of this category of databases has been considerable, at 5.8% (1991-1992), 14.2% (1992-1993) and 6.4% (1993-1994). In addition, although the number of databases in the "Business" category decreased only once during the period from 1991 to 1992, it has increased in all other years and continues to account for the largest number of databases overall.

On the other hand, the number of databases in the "Natural Science and Technology" category decreased for the first time in the most recent survey. In addition, the "Humanities" category exhibited a decrease for the second time, following the decrease two years ago.

The "General" category, however, has demonstrated remarkable growth. The largest increase was made in the subcategory of "Newspapers, journals and news". In actuality, databases of this type are increasing at the rate of roughly 50 per year. Furthermore, 100 or more databases are distributed in the following eight subcategories (Table II-2).

- (1) Newspapers, journals and news (412)
- (2) Corporate profiles and finance (overseas) (267)
- (3) Finance, securities and foreign exchange (161)
- (4) Medicine, pharmaceuticals, biotechnology and biology (152)
- (5) Electricity, electronics and information (128)
- (6) Marketing and products (121)
- (7) General business/industry (110)
- (8) Chemistry (106)

Although the second ranked subcategory, "Corporate finance and profiles", is limited to overseas corporations, when Japanese corporations are included in this figure, the number of databases in the combined "Corporate and finance profiles", category becomes 359. In addition, when the "General" subcategories of "Newspapers, journals and news" and "Who's who/Organizations", for which there is a large amount of business use, are added to the Business category, this corrected value for the Business category accounts for more than half of the total, at

53.7%. Although this corrected Business category value of the number of databases exceeded more than half of all databases for the first time in 1986, this trend has remained unchanged since that time.

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

(continued on next page)

		1988	1989	1990	1991	1992	1993	1994
General	Subcategory							
	General (Encyclopedia and document guide)	47	62	66	70	69	69	75
	Newspapers, journals and news	153	192	231	287	322	373	412
	Who's who / Organizations	53	58	62	72	68	75	73
	Government administration	13	26	30	39	38	46	48
	Laws	25	65	67	56	63	67	80
	Politics	19	22	32	40	43	46	40
	Health and sports	11	10	9	14	15	27	27
	Travel and scheduling	5	6	8	7	8	9	8
	Recreation and leisure facilities guides	18	19	31	37	39	49	52
	Domestic culture and home life	15	7	10	9	12	20	24
	Dictionary and supplementary files	23	23	25	31	33	26	30
	Place names, maps and addresses	11	10	13	12	11	7	5
	Other	26	29	37	47	42	57	53
	Subtotals	419	529	621	721	763	871	927
Natural science and technology	General science and technology	67	60	73	74	73	61	58
	Patents	64	65	75	79	82	93	95
	Medicine, pharmaceuticals, biotechnology , biology	123	129	140	164	164	178	152
	Chemistry	91	94	97	111	101	106	106
	Physics	4	3	6	6	6	7	7
	Mathematics	2	3	4	4	4	3	3
	Electricity, electronics and information	71	81	115	114	130	128	128
	Machinery	12	11	14	16	18	15	19
	Construction (civil engineering, architecture)	6	13	18	17	18	19	18
	Space, earthe and marine	20	20	21	22	28	31	32
	Atomic power	3	3	3	4	4	4	4
	Environment and pollution	46	45	50	46	48	55	51
	Energy and resources	23	24	26	33	41	48	61
	Agriculture	11	12	13	12	13	12	14
	Meteorology	13	13	13	12	12	12	5
	Metals and materials	17	20	32	39	38	38	33
	Food	7	8	9	9	8	12	12
	Fibers, lumber and pulp	5	5	5	5	5	4	4
	Other	9	22	24	28	23	19	17
	Subtotals	611	631	738	795	816	845	819

Source: Prepared from the "Database Directory", MITI

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

	Subcategory	1988	1989	1990	1991	1992	1993	1994
Humanities	General humanities	10	10	11	8	9	10	6
	Education	17	17	15	12	12	12	10
	Sociology	6	6	8	11	7	7	6
	Vital statistics	17	20	26	28	32	34	39
	Law	1	1	1	2	1	2	2
	History and political science	2	2	2	2	2	4	5
	Arts (movies, music)	7	7	5	9	8	10	8
	Psychology	5	3	3	3	2	2	1
	Linguistics	2	3	2	3	2	2	2
	Philosophy	1	1	1	1	1	1	1
	Religion	7	9	9	8	8	8	7
	Other	2	2	6	6	6	5	7
	Subtotals	77	81	89	93	90	97	94
Business	General business/industry	67	62	77	95	93	109	110
	Marketing and products	93	102	109	130	132	120	121
	Economy (overseas)	111	108	71	86	73	71	68
	Economy (Japan)	62	76	82	86	89	87	92
	Corporate finance and profiles (overseas)	139	149	204	238	235	256	267
	Corporate finance and profiles (Japan)	61	66	72	78	88	88	92
	Accounting and management	12	10	10	13	15	16	17
	Finance, securities and foreign exchange	138	140	134	156	156	154	161
	Energy industry	37	38	8	8	15	15	13
	Communications and broadcasting	31	32	27	33	28	38	53
	Agriculture, forestry and fisheries	11	7	10	9	9	5	4
	Chemical industry	9	9	9	10	10	15	13
	Labor	9	8	6	7	6	9	13
	Architecture and construction	4	5	5	6	6	5	5
	Transportation	19	23	16	22	23	27	27
	Sales and services	9	7	7	15	15	15	16
	Distribution and real estate	6	8	10	9	9	7	5
	Other	33	31	39	61	57	69	83
	Subtotals	851	881	896	1,062	1,059	1,106	1,160
	Other	6	6	10	15	71	61	61
Grand totals		1,964	2,128	2,354	2,686	2,799	2,980	3,061

Source: Prepared from the "Database Directory", MITI

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

This section provides a comparison of databases in the United States and Japan by looking at various types of data. Since data in this field is not necessarily internationally compatible, the results obtained should be used to provide an indication of database conditions in the two countries. Comparison was made based on the following parameters:

- (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

The first four parameters can be considered to be indicators of the strength of the database service industry or, in other words, database industry strength. The last four parameters are indicators of the distribution status of databases in the respective countries.

3.1 Comparison of Database Industry Strength

The database industry in the United States is overwhelmingly superior with respect to indicators of database industry strength (Table II-3). With respect to the number of producers and number of participating organizations, in particular, the numbers in the United States are 10.9 times and 11.2 times higher than in Japan, respectively. Since producers are positioned at the top of the database distribution mechanism, the difference in numbers between the two countries translates directly into differences in the basic strength of database services.

There is also a 6.6-fold difference in database sales between the two countries, and the difference is continuing to widen, with the number of passwords being 8.7 times greater in the United States. Although the number of passwords is also an indicator of the size of the database user population, this figure does not include consumer services such as America On-Line and Prodigy. If these were also included, the difference would be even larger. Furthermore, the number of passwords in the United States referred to here includes overseas users such as Japanese corporations. In consideration of the market superiority of the English language, it is only natural to think that U.S. database companies are able to secure a large number of customers overseas, and this also has an effect on the difference in strength between the two database industries.

Table II-3 Comparison between U.S. and Japanese Databases (1994)

Criteria	Japan	United States
(1) Database sales	1.0	6.6
(2) No. of passwords	1.0	8.7
(3) No. of producers	1.0	10.9
(4) No. of participating organizations	1.0	11.2
(5) No. of distributed databases	1.0	2.6
(6) No. of domestic databases	1.0	5.2
(7) No. of business databases	1.0	2.2
(8) No. of fact databases	1.0	2.0

Note: Sources and calculation methods are the same as indicated in Fig. II-3.

3.2 Comparison of the States of Database Distribution

The difference between the United States and Japan in terms of the status of database distribution is not as large as in the case of industry strength. This is only natural since a large number of databases in the United States can be accessed on-line from Japan. Incidentally, in terms of the number of databases, there are 2.6 times more accessible databases in the United States than in Japan, 2.2 times more business databases and 2.0 times more fact databases. When these figures are corrected for population differences (that of the United States is roughly twice that of Japan), the differences between the two countries can be seen to virtually disappear. However, when looking at the number of domestic databases, the United States still has 5.2 times more than Japan.

Furthermore, data pertaining to U.S. database sales includes the amount for Canada, as compiled by the research firm Management Decisions. Data for Japan uses figures taken from the Survey of Selected Service Industries of MITI. With respect to the number of passwords, U.S. data uses 1994 data taken from the Electronic Information Report issued by SIMBA Information Inc., while Japanese data uses data as of March 1, 1995 taken from the established rankings of "Nikkei New Media" published by Nikkei BP. The number of producers, number of participating organizations, number of databases and other data for the United States was calculated based on the paper by Martha E. Williams excerpted from the January 1995 edition of Vol. 1 (Online) and Vol. 2 (CD-ROM, etc.) of the Gale Directory of Databases. Data for Japan is based on the "Database Directory" (1994 edition) of MITI (Fig. II-3, Table II-3).

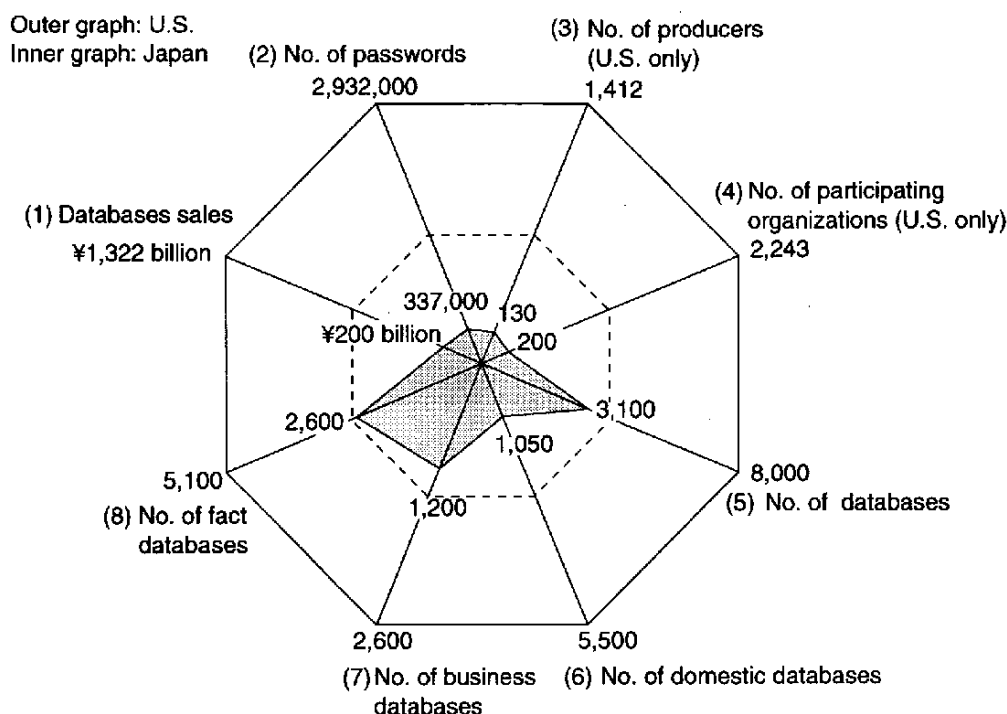


Figure II-3 Graphical Comparison of Database Conditions in the United States and Japan (1994)

- Notes: 1. Database sales for the United States indicate approximate figures as calculated at the rate of ¥100/US\$ based on data of Management Decisions Inc. (which includes sales for Canada). Sales for Japan were taken from the "Survey of Selected Service Industries" (1994 edition) of MITI.
2. U.S. data for the number of passwords uses data as of December 31, 1994, taken from the Electronic Information Report (formerly known as the IDP Report) issued by SIMBA Information Inc., while Japanese data uses data as of March 1, 1995, taken from the established rankings of "Nikkei New Media" published by Nikkei BP. However, the number of passwords for the United States is the total passwords in the "business/professional category" and "financial information service category", and does not include those in the "consumer services category" and "computer reservation system category". The total number of passwords for the United States becomes 9,327,000 when these are included.
3. Items (3) through (8) for the United States were compiled based on the paper by Martha E. Williams excerpted from the January 1995 edition of Vol. 1 (Online) and Vol. 2 (CD-ROM, etc.) of the "Gale Directory of Databases". Data for Japan was taken from the "Database Directory" (1994 edition).
4. Actual numbers are shown for items (5) through (8).

III Trends in the Database Service Industry

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

1. Positioning of Database Services

Companies covering a wide range of business types are involved in the database service market. In addition to information services, some firms are engaged in printing, publishing and newspapers, while others are engaged in a variety of other businesses, such as broadcasting, communications, think tank services and public services.

These firms were asked about the positioning of their database business within their companies by asking them whether or not it is their major business, both for now and the future. Of the 127 firms asked, 44.1% replied that it is currently their major business. This represents an increase of 4.5% from the previous survey (September 1994). In terms of the future, more than half (57.5%) replied that it would be their major business in the future (Fig. III-1).

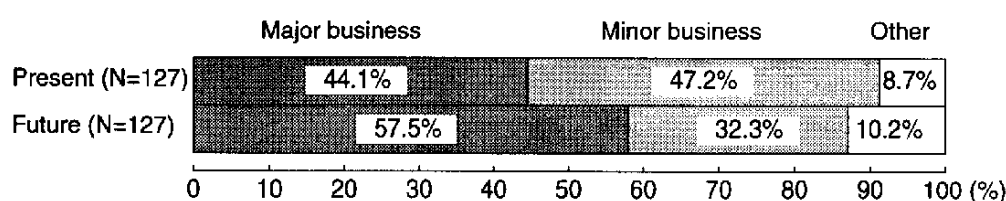


Figure III-1 Positioning of Database Services

2. Sales of Database Services

The "Report of the Survey of Selected Service Industries", a compilation of selected statistics issued by MITI, serves as a source of official statistics relating to database sales. As has been previously described, database sales in Japan in 1994 totaled ¥198.8 billion according to this survey.

Here, instead of looking at actual numbers, an attempt will be made to determine the positioning of database services as a business by gaining an understanding of trends relating to database sales while looking at several indicators as shown below.

- (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 form
- (4) Year-on-year growth rates of database sales
- (5) Estimated annual average growth rates of database sales over the next five years (corporate level)
- (6) Estimated annual average growth rates of database sales over the next five years (industry level)

2.1 Ratio of Database Sales to Company Gross Sales

The overall average ratio of database sales to company gross sales for the 91 replying companies was 27.5% (simple mean), indicating a slight increase of 0.4% from the previous survey. In addition, in looking at the distribution of sales ratios, "1-5%" was the most common reply given by 25.3% of the firms. This was followed by "15-50%" at 22%, and "Less than 1%" at 13.2%. The number of firms for which the ratio of database sales was 10% or less accounted for 47.3% of all firms questioned, representing the lowest value obtained among all previous surveys (Fig. III-2).

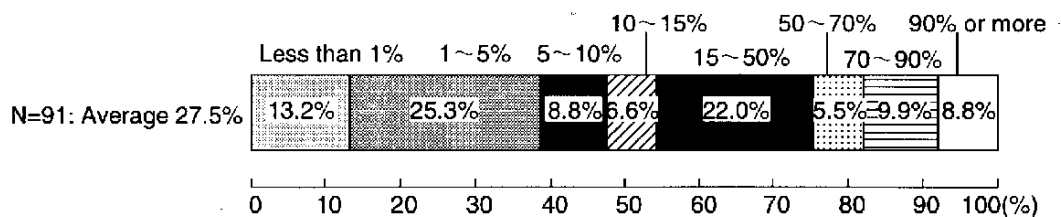


Figure III-2 Distribution of the Ratio of Database Sales to Company Gross Sales

2.2 Ratio of Japanese Database Sales to Total Sales

The ratio of Japanese database sales to total database sales is an average of 87.5% for all 111 replying companies. This ratio has remained consistently at 85% and above ever since this survey was started in 1985, indicating that domestic databases are the leading source of database sales.

2.3 Database Sales Ratio by Supply Form

Remarkable differences can be seen between domestic databases and overseas databases. Namely, in contrast to on-line sales being overwhelmingly large in the case of overseas databases (71.7%), in the case of domestic databases, on-line sales account for just over half of total sales (52.4%), thus indicating considerable diversity in supply forms. Incidentally, in the case of domestic databases, sales on magnetic tape account for 12.1%, while sales on CD-ROM account for 11.7% of total sales (Fig. III-3).

Furthermore, the ratio of domestic database sales by CD-ROM has exhibited a continuous increasing trend, from 5.1% in 1993, to 8.5% in 1994 and 11.7% as of the most recent survey.

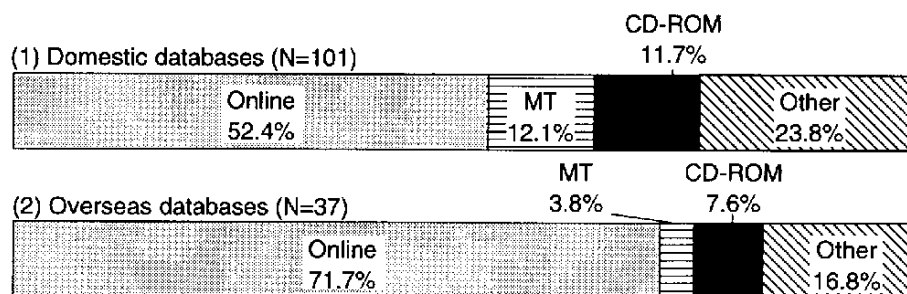


Figure III-3 Ratio of Database Sales by Supply Form

2.4 Growth Rate of Database Sales

The average growth rate of database sales in comparison with the previous year among 100 replying companies is 25.4%. In looking at the distribution of the range of these growth rates, however, the considerable amount of variation is conspicuous. Incidentally, although 13% of the replying companies reported negative growth in comparison with the previous year, 16% reported a growth rate of 70% or more. The most common reply was a growth rate of less than 10%, which was reported by 27% of the companies.

In the case of last year's survey (October 1994), due in part to the severity of the business recession, being felt the most at that particular time, 25.2% of the 111 replying companies reported negative growth. The overall average growth rate was also lower, at only 12.1%. In consideration of this point, database sales can be seen to be showing signs of recovery. However, since 30% of the replying companies still reported negative growth or no change even in the most recent survey, severe conditions appear to be continuing (Fig. III-4).

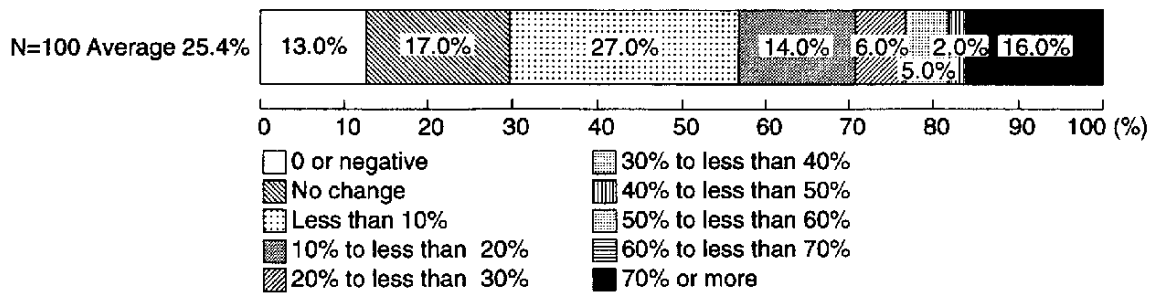


Figure III-4 Distribution of Year-on-Year Changes in Database Sales

2.5 Estimated Growth Rate of Future Database Sales (Company Level)

Companies were asked to estimate the annual average growth rate of database sales over the next five years at their respective companies. The overall average was 24.2% (99 replying companies). Although this represents an increase of 6.2% over the previous survey, the total for "negative" or "no change" was 16.1%, thus indicating some degree of apprehension regarding the future (Fig. III-5).

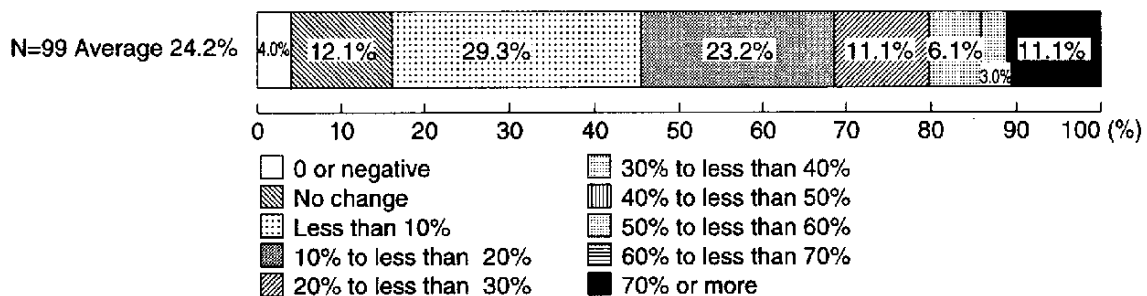


Figure III-5 Distribution of Estimated Annual Average Growth Rate of Database Sales over Five Years (Company Level)

2.6 Estimated Growth Rate of Future Database Sales (Industry Level)

Companies were also asked to estimate the annual average growth rate of database sales for the entire database industry over the next five years. Although the growth rate for the entire industry was estimated to be higher than that at the corporate level as described in the previous section, the overall average was still up only slightly from the previous survey, increasing by only 1.6%, to 26.2% (Fig. III-6).

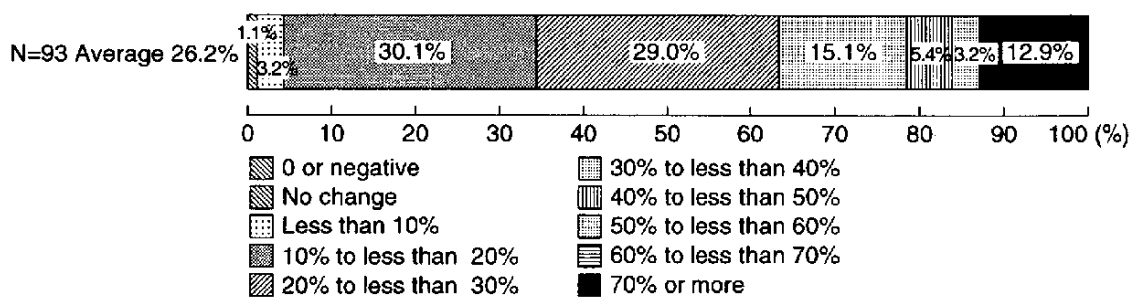


Figure III-6 Distribution of Estimated Annual Average Growth Rate of Database Sales over Five Years (Industry Level)

3. Media with the Highest Expectations

Companies providing database services were asked to indicate the media on which databases are supplied for which they have the highest expectations over the next five years, along with its annual average growth rate.

3.1 Media with the Highest Expectations

This survey marks the third time this question was asked. In the results of this survey, the media that were consecutively ranked 1st and 2nd for highest expectations changed positions. Namely, in the previous two surveys, CD-ROM was ranked 1st, being indicated by 84.2% and 73.9% of replying companies, respectively. On the other hand, database utilization by personal computer network services was indicated by 52.5% and 67.2% of replying companies in the previous two surveys, suggesting growing support for this form of media. In the most recent survey, however, database utilization by personal computer network services was indicated by 74.3% of the replying companies, surpassing that of CD-ROMs, at 60.2%, and moving into the top position.

Major commercial personal computer network services such as NIFTY-Serve and PC-VAN, which played a major role at the time of the Great Hanshin Earthquake in January 1995, have witnessed an explosive increase in the numbers of their subscribers. These numbers indicate the high degree of expectations being placed on these services as media for supplying (utilizing) database services.

In addition, among the top five ranked media in terms of expectation, there was a change in the 5th position for the first time in this survey. "Fax services", which was ranked 5th until now, dropped 4.5 points, to 7th place. In its place, the previously 7th ranked "future package media" rose by 7.8 points into 5th place. Furthermore, "Internet" was the most common media indicated by companies in the "Other" category (Fig. III-7).

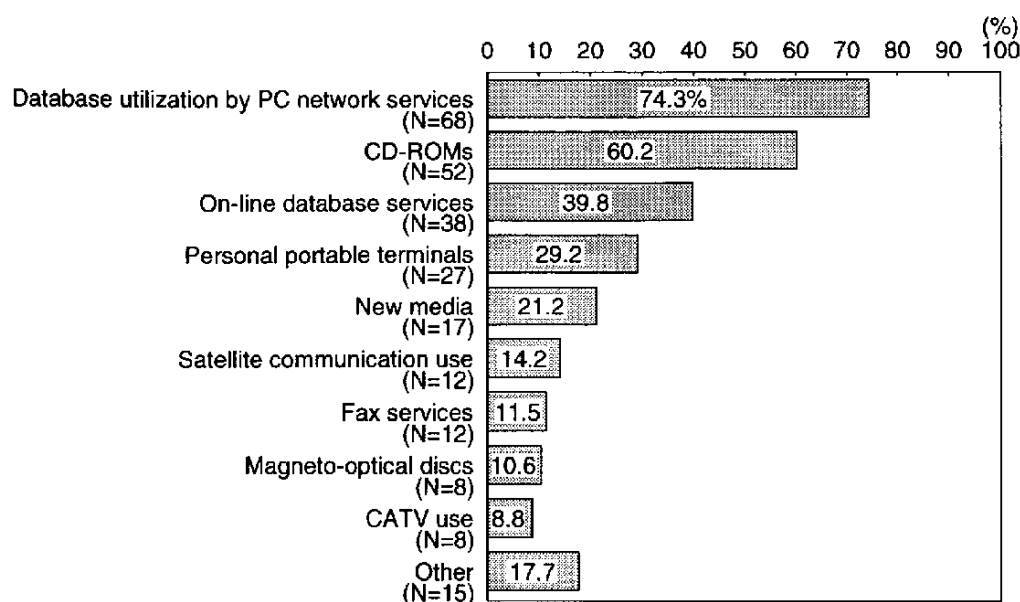


Figure III-7 Media Expected to Demonstrate the Highest Growth over the Next Five Years
(N=113: multiple replies)

Note: 1. There were hardly any replies for Dial Q² services and magnetic tape.

2. Replies in the "Other" category consisted almost entirely of services provided through the Internet.

3.2 Predicted Growth Rates

The top three media in terms of largest predicted growth rates consisted of (1) CATV use at 70.0%, (2) CD-ROM at 50.9% and (3) Database utilization by personal computer network services at 49.2%. A main characteristic of the findings in this survey is the jump by CATV use from 12.5% (9th place) in the previous survey to the top position.

Regulations in the field of CATV have become increasingly relaxed recently.

Coupled with the growing number of CATV subscribers, the scale of CATV broadcasts is also expanding. Moreover, considerable expectations are also being placed on CATV, such as removing the barrier between communications and broadcasting. The number of subscribers to urban-based CATV services broke the two million household mark for the first time in 1994 (up 35.8% from the previous year). These circumstances are believed to be part of the reason for CATV being ranked 1st in this survey.

Another conspicuous aspect of this year's survey results is 15 replies being given in the "Other" category. Although this category indicates an annual average growth rate of 129.9%, this is considered to most likely reflect the expectations placed on the Internet. In view of these results, it can be seen that database service media are becoming increasingly diverse and undergoing considerable change (Fig. III-8).

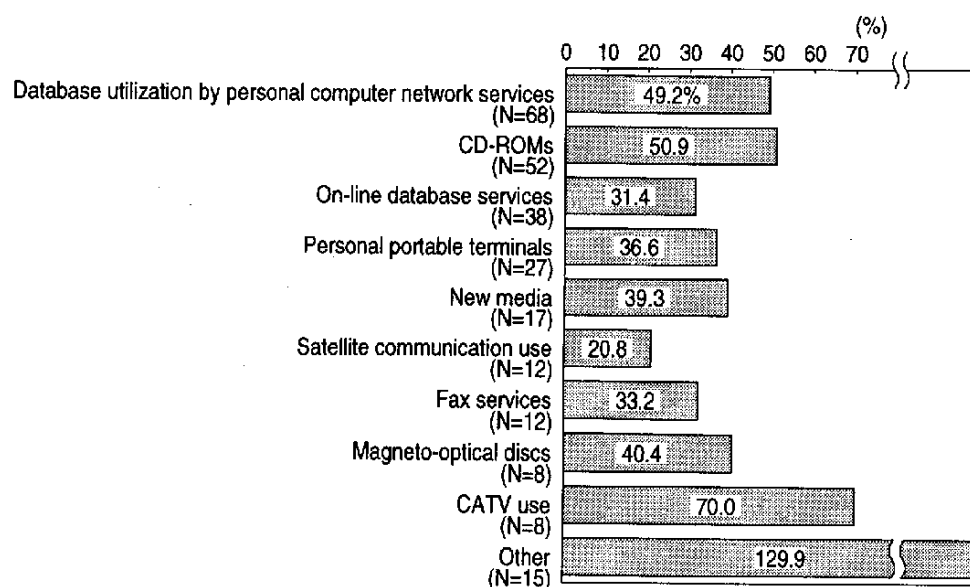


Figure III-8 Annual Average Growth Rates of Media Expected to Demonstrate the Highest Growth over the Next Five Years (Forecast)

4. Distribution of Databases

In the case of producers distributing their own databases, there are some producers that perform distribution on their own as well as those that commission distribution to another company. Companies that distribute (supply) databases they have produced on their own are referred to as "producers/distributors".

Among the 77 companies that replied that they were producers, 66 supply databases on their own (85.7%), while 31 commission distribution to other companies (40.3%). In other words, these figures indicate that there are numerous producers/distributors in Japan. Since the proportion of companies also commissioning distribution to other companies is also greater than 40%, the forms of database distribution can be said to be increasingly diverse.

Incidentally, in the case of commissioning distribution to other companies, 27.6% of those companies replied that they commissioned distribution to only one company, while 17.2% indicated two companies. These two groups combined account for nearly 45% of the total. However, in comparison with the results of the previous survey, there is a tendency to commission distribution to a large number of firms. Incidentally, the number of companies commissioning distribution to "5-10 companies" increased from 12.8% in the previous survey to 13.8% in the current survey, those indicating "10-15 companies" increased from 2.6% to 10.3%, and those indicating "20 or more companies" increased from 2.6% to 6.9%. Consequently, the average number of commissioned companies increased from the previous figure of 3.4 companies to 8 companies in the current survey.

5. Problems in Database Construction

Database producers were asked about problems they are aware of when constructing databases. As might be expected, the major problem involved cost. Although this question has been asked for a long time, there has consistently been no change in cost being indicated as the major problem.

The major problem indicated by the 78 replying companies was "High construction cost, including data collection and data entry", which was indicated in 88.5% of the replies. This was followed by "High maintenance cost", which also demonstrated a high rate of 66.7%.

In comparison with the previous year, the problem that exhibited the largest increase in response rate was "Difficulty in recovering initial investment", increasing by 8.7 points to 38.5% (Fig. III-9).

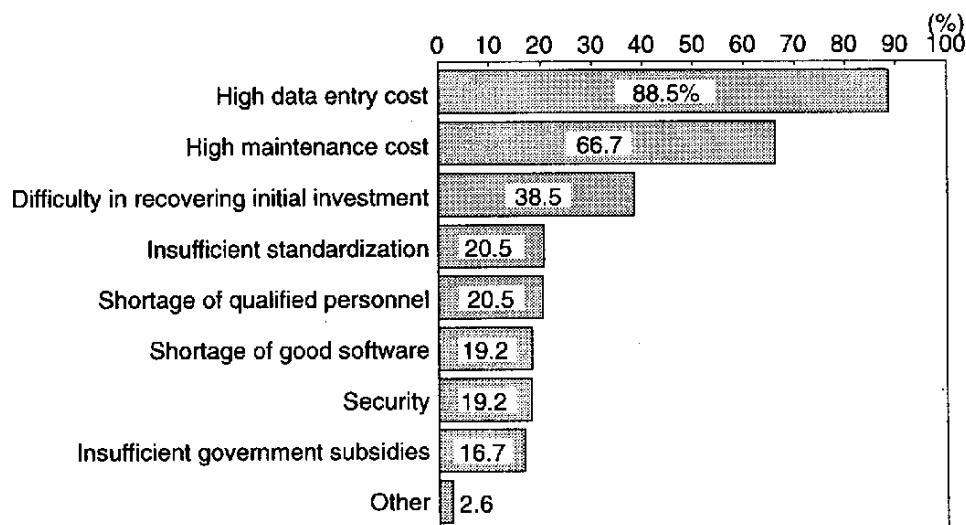


Figure III-9 Problems in Database Construction (N=78: multiple replies)

6. Utilization of Public Data

Public data, which refers to the statistical data and document information such as council reports produced by government agencies and other public organizations, is being given considerable expectations for use as database source data. Producers were asked to what extent they actually use public data, and what types of problems they encounter in terms of using this data.

To begin with, 42 of the 79 replying companies are using public data as database source data (53.2%). Since that proportion was 42.3% in the previous survey, the results of the current survey represent an increase by more than half, thus indicating that the use of public data is steadily increasing.

In addition, the most common reason for using public data was that "data is updated annually or regularly", accounting for 43.9% of the replying companies. Although "reliability of data" was by far the top reply in the previous survey, accounting for nearly 70% of the total number of replying companies, it fell to 2nd place in the current survey, but only by a small margin (Fig. III-10).

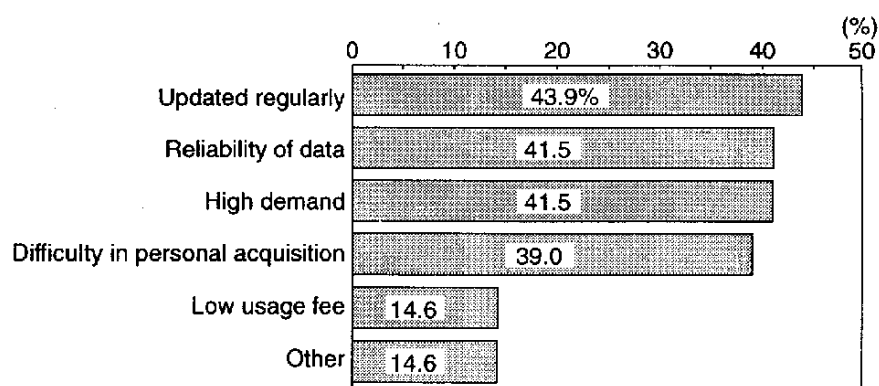


Figure III-10 Reasons for Using Public Data (N=41: multiple replies)

Public data currently being used in the form of character data consists primarily of "government reports" (28.9%) and "government white papers" (23.7%). In terms of numerical data, in addition to "general business industry" (42.1%) and "economy, business climate and finance" (39.5%), various types of numerical data also exhibited high percentages, including "population, employment and labor", "corporations" and "international trade" (34.2% each) (Fig. III-11).

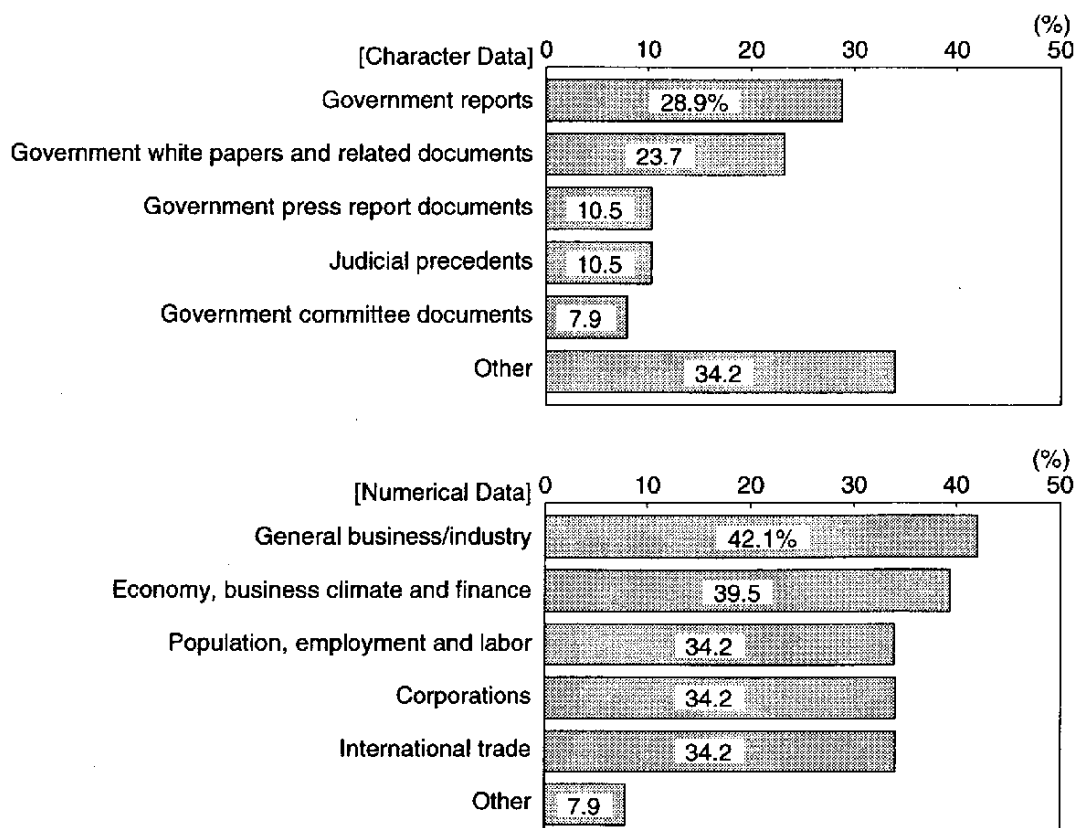


Figure III-11 Currently Used Public Data (N=38: multiple replies)

Note: The "Other" category of character data includes city planning data, government reports, monthly economic reports, etc.

With respect to problems in using public data, the two replies of "Late announcement and supply of data (old data)" (60.5%) and "Supply form of public data used is on paper and not digitized" (55.3%) were indicated far more often than any other replies. One of the more conspicuous differences with last year's survey is the reply "Bothersome procedures" decreasing from 25.9% to 10.5%, representing a significantly large drop. In contrast, the reply "Data does not match needs" increased from 14.8% to 23.7%.

On the other hand, the two major reasons for not using public data consisted of "Desired data is not available" (48.6%) and "Supply medium is paper and not digitized" (29.7%).

7. Types of Data (Text, Image, Video, etc.)

This question was first asked starting in the previous survey to determine what types of data are being supplied either on-line or off-line as commercial databases from the standpoint of producers or distributors, and investigate what types of data producers or distributors would like to supply or increase supply of in the future.

7.1 Data Currently Being Supplied

To begin with, there is no change in the top three types of data currently being supplied, namely (1) "Text (fact, character)", (2) "Text (reference)" and (3) "Numerical". The type of data that exhibited the largest growth from the previous survey is "Image (still pictures, photographs, etc.)", previously ranked 5th, increasing by 9.6 points, to 22.1% and 4th place. Furthermore, although only accounting for a low number of replies in the previous survey, "Video (animation)" increased by 1.5 points, nearly doubling the previous response rate, to 2.9% (Fig. III-12).

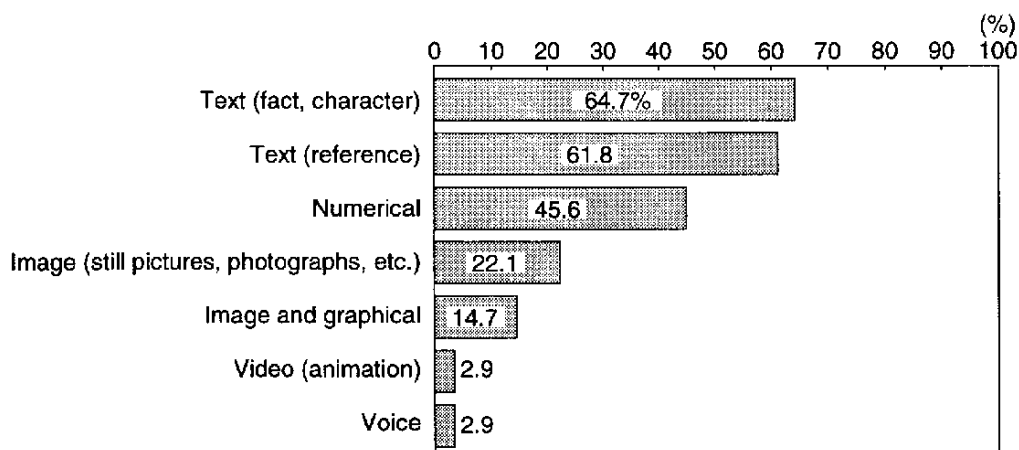


Figure III-12 Types of Data Currently Supplied On-Line (N=68: multiple-replies)

Next, in looking at the types of data being supplied off-line, the top three types remain unchanged in the same manner as on-line types. However, there are some changes in the reply percentages for data starting in 4th place and down. Namely, although "Image and graphical" fell by 3.1 points to 6.6%, the other types increased over their levels in the previous survey. Incidentally, "Image (still pictures, photographs, etc.)" increased by 7.5 points to 31.1%, while "Voice" and "Video (animation)" data increased by 2.4 and 2.1 points, respectively (Fig. III-13).

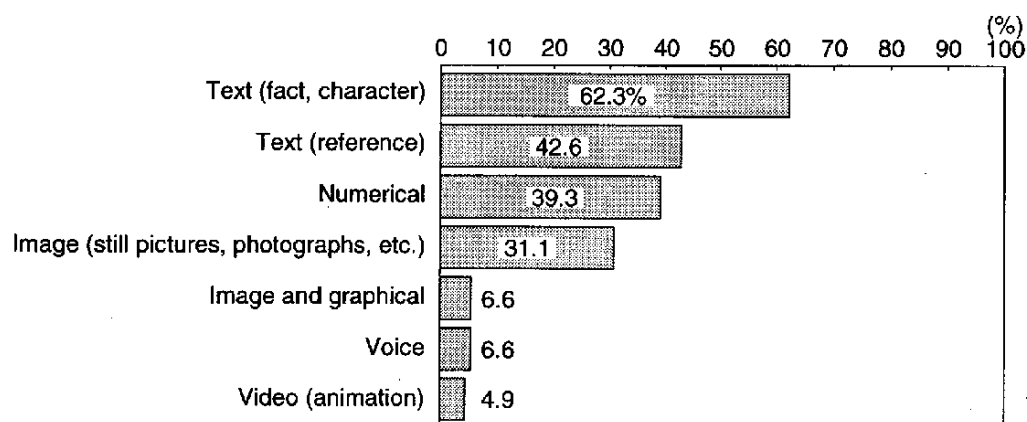


Figure III-13 Types of Data Currently Being Supplied Off-Line (N=61: multiple replies)

On the basis of the trends described above, there appears to be a growing tendency towards the use of multimedia as a medium for image data in data currently being supplied.

7.2 Data Scheduled to be Supplied in the Future

The situation becomes quite different in the case of data scheduled to be supplied or for which supply is scheduled to be expanded in the future. In other words, the trend towards multimedia applications appears even more prominently. For example, "Image (still pictures, photographs, etc.)", which was ranked 2nd in the previous survey, jumped up to the top position in terms of data desired to be supplied on-line in the future, increasing by 2.2 points, to 46.7%. "Video (animation)" also increased by 9.7 points (Fig. III-14).

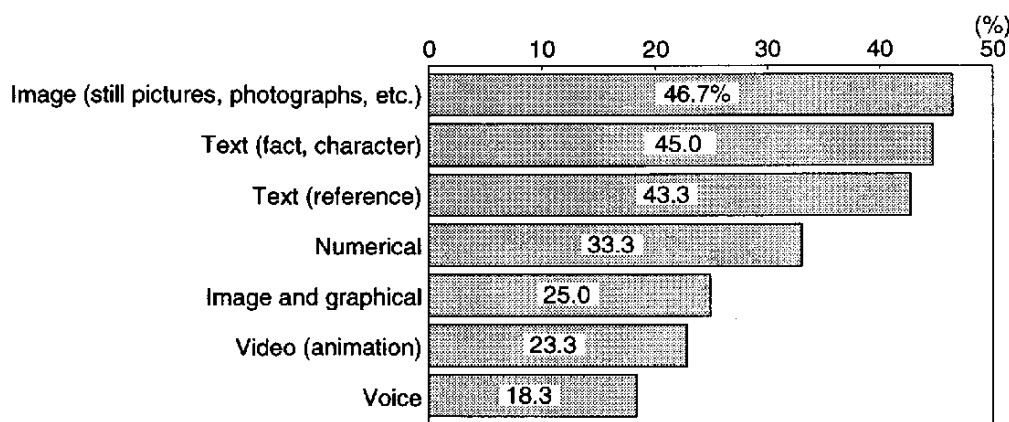


Figure III-14 Types of Data Desired to be Supplied (or Desired to be Expanded) On-Line
(N=60: multiple replies)

On the other hand, in the case of off-line supply of data, although "Text (fact, character)" and "Image (still pictures, photographs, etc.)" tied for the top spot with equal percentages of the replies, in the current survey, the former attained the top ranking, though by only a small margin. Furthermore, the 3rd and 4th places occupied by "Text (reference)" and "Numerical" increased by 11.1 and 2.9 points, respectively (Fig. III-15).

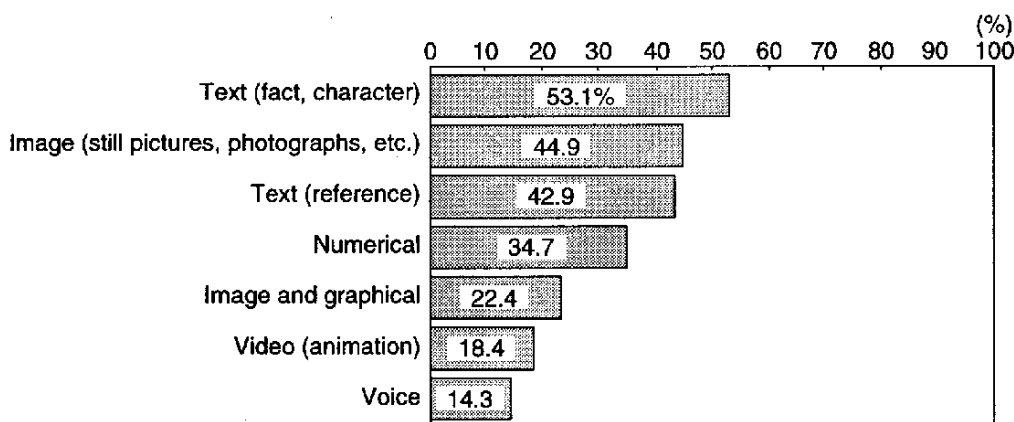


Figure III-15 Types of Data Desired to be Supplied (or Desired to be Expanded) Off-Line
(N=49: multiple replies)

7.3 Positioning of Image and Video Data

Companies currently supplying image and video data were asked about the positioning of that data. Only 14.7% of the companies replied that this data constituted their "Main service" (up 2.2 points from the previous survey). On the other hand, the replies "Partial service" and "Extremely small-scale service" increased by 3.8 and 10.1 points, respectively, and combined to account for 38.2% of the total. In addition, when this is considered with the decrease of the "Other" reply

from 6.3% in the previous survey to 0% in the current survey, it indicates that companies are gradually getting a clearer picture of the positioning of image and video data.

On the other hand, when companies not currently supplying image or video data were asked when they expected to start supplying that data, the reply of "Not considering at present" was given by 38.1% of the companies. "Within 3 years" and "Within 1 year" increased slightly to 28.6% and 9.5%, respectively.

8. Database Supply by CD-ROM

8.1 Status of CD-ROM Database Supply

The number of companies supplying databases by CD-ROM is increasing steadily each year. The proportion of companies that replied they are supplying databases by CD-ROM has increased each year, starting in 1990 at 19.6% and increasing to 24.8%, 26.3%, 30.8%, 36.5% and finally to 41.9% in this survey (Fig. III-16).

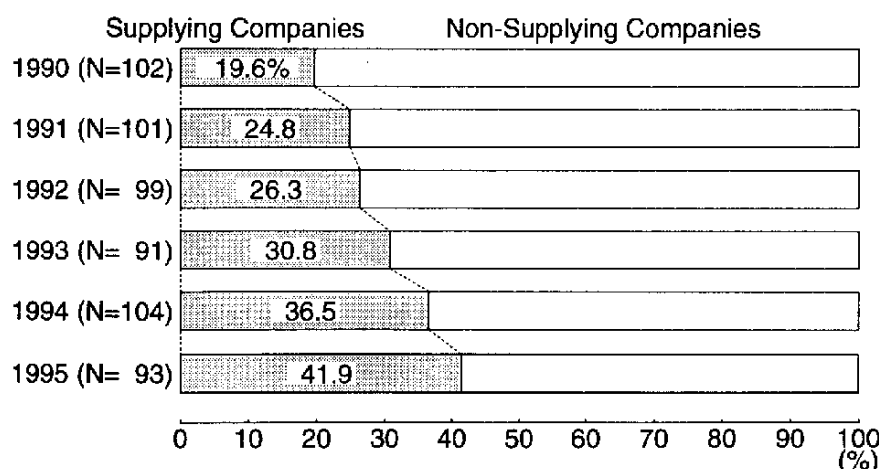


Figure III-16 Proportion of Companies Supplying Databases by CD-ROM

8.2 Categories of CD-ROM Databases

The categories of databases being supplied by the 38 companies supplying CD-ROM databases consist of (1) General (28 companies), (2) Business (20 companies), (3) Natural Science and Technology (12 companies), and (4) Humanities (4 companies). A further breakdown of these categories reveals that the top three subcategories consist of the following: (1) "Newspapers, journals and news" (9 companies), (2) "Magazine, book and periodical information" (8 companies), and (3) "Dictionary, encyclopedia and document guides" (7 companies) (Table III-1).

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

	Currently supplied (N=38)	Scheduled to be supplied in the future (N=40)
[General]	[28]	[18]
Audio-visual, games, entertainment	2	1
Dictionary, encyclopedia and document guides	7	2
Service guides and information	1	—
Magazine, book and periodical information	8	5
Who's who	1	3
Newspapers, journals and news	9	6
CAI	—	1
[Business]	[20]	[28]
Finance, securities, foreign exchange and market information	2	2
Standards	—	1
Products and product information	1	3
Corporate finance and profiles	6	6
Economics and business	4	4
Maps and mapping, telephone numbers and address codes	2	3
Statistics and populations	1	5
Laws, regulations, precedents, taxes and tax information	4	4
[Natural Science and Technology]	[12]	[8]
Medicine, pharmaceuticals, biotechnology and chemistry	6	4
Science, technology and patents	4	1
Computers and software	1	—
Architecture and construction	—	3
Materials and components	—	1
Space, earth, marine and fisheries	1	—
[Humanities]	[4]	[4]
Arts, culture, literature and history	2	1
Language and words	1	1
Maps and geography	1	1
Education and religion	—	1
Other	[1]	[3]
Totals	64	61

9. Internet Utilization

9.1 Internet Utilization Status and Reasons

This question was newly added to the survey last year in order to gain an understanding of the actual state of database services provided by database service companies via the Internet. To begin with, when companies were asked whether or not they are providing database services via the Internet, they responded by indicating an aggressive stance with respect to Internet use in comparison with the previous year.

More specifically, those companies that replied they are currently providing database services via the Internet increased from 7 (6.8%) to 12 (12.6%). Those planning on providing such services also increased from 13 (12.6%) to 24 (25.3%). On the other hand, the number of companies that indicated they are not considering providing database services via the Internet decreased from 31 (30.1%) in last year's survey to 16 (16.8%) in this year's survey (Fig. III-17).

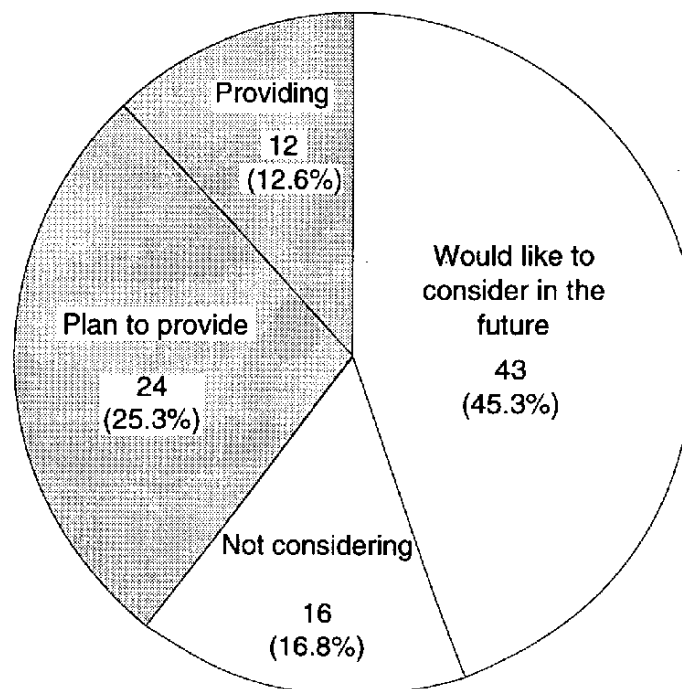


Figure III-17 Implementation Status of Database Services via the Internet (N=95)

Next, with respect to the reasons for using the Internet (or planning to use the Internet), the two reasons of "Acquisition of new users" (68.6%) and "User preference" (57.1%) account for more than half of all replies (Fig. III-18).

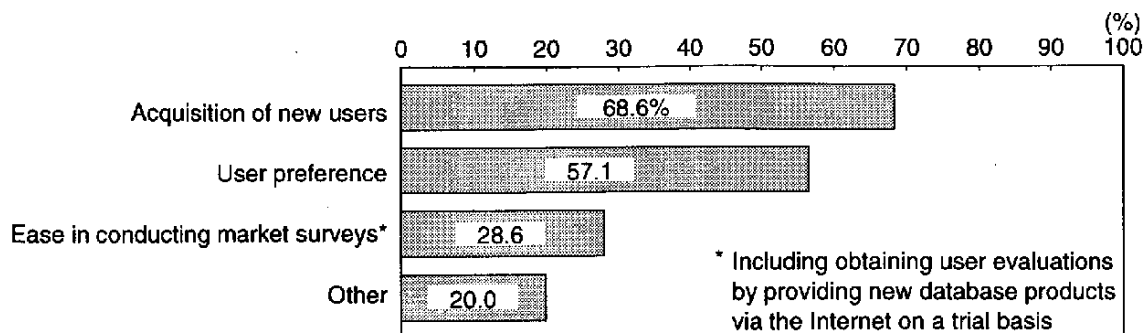


Figure III-18 Reasons for Implementing or Planning to Provide Database Services via the Internet (N=35: multiple replies)

9.2 Concerns and Problems with Using the Internet

Companies currently using the Internet (including those planning to use the Internet in the future) were similarly asked about any concerns or problems they have with using the Internet. The results obtained were very similar to those of the previous survey, with 32 companies (88.9%) replying that they have some type of concern or problem. Only four companies out of 37 (11.1%) replied that they have no concerns at all. These findings indicate that, from the standpoint of database service companies, the Internet has yet to become firmly established as a channel for supplying databases.

The most common concern or problem was concern over security, indicated by 81.3% of the replying companies. This was followed by bothersome billing, at 68.8%, and problems with liability during failure, at 43.8%. Although all of these items warrant a discussion of the merits of the Internet, they also present serious problems for database service companies who are engaged in the generation of earnings by supplying information (Fig. III-19).

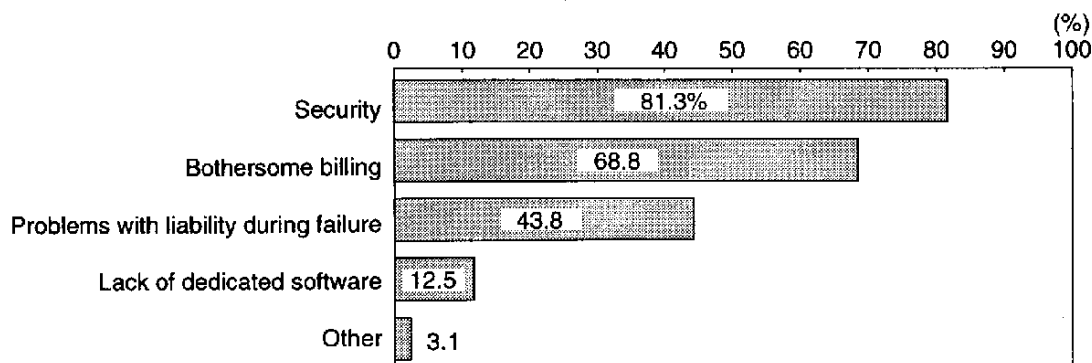


Figure III-19 Concerns and Problems Relating to Internet Use(N=32: multiple replies)

Note: The "Other" category includes the high cost of dedicated lines, etc.

Furthermore, when companies not considering using the Internet were asked for their reasons, the results were considerably different from the previous survey. The most frequent reply given in the current survey of "bothersome billing" (56.1%) was ranked 3rd in the previous survey (29.7%). In addition, although the 2nd most common reply in the current survey of "Security" (46.3%) did not change in ranking, it increased by 15 points in comparison with the result of the previous survey. Moreover, the most frequent reply in the previous survey "Merits not clear", which gathered 43.8% of the replies, fell to 3rd place after falling 4.8 points. On the other hand, "Internet system not clearly understood" decreased by 8.8 points, thus indicating a trend in which, as the Internet becomes better understood, concerns and problems relating to its use become more concrete.

10. Present State of Overseas Database Supply

The Japan Database Industry Association (DINA) was commissioned by DPC in July 1995 to conduct their 9th survey targeted at DINA members, DPC supporting members and other organizations involved in database services. Survey forms were sent to 200 organizations, replies to which were obtained from 88 (response rate: 44.0%).

Among the organizations submitting replies, 48 are currently providing database services overseas, while five are in the processing of planning such services. The number of databases being supplied overseas from Japan has continued to increase over the past eight years, and, as of July 1995, there were 377 types of databases being supplied overseas, representing an increase of 6.8% from the previous year (Table III-2, Fig. III-20).

Table III-2 Number of Domestic Databases being Supplied Overseas

Item \ Time of Survey	1987	1988	1989	1990	1991	1992	1993	1994	1995
No. of databases and proportion supplied (%)	28 (9.5)	83 (19.5)	104 (19.7)	155 (23.4)	226 (28.0)	290 (32.5)	306 (32.8)	353 (35.1)	377 (36.0)

Note: Proportion supplied = No. of domestic databases supplied overseas / Total no. of domestic databases

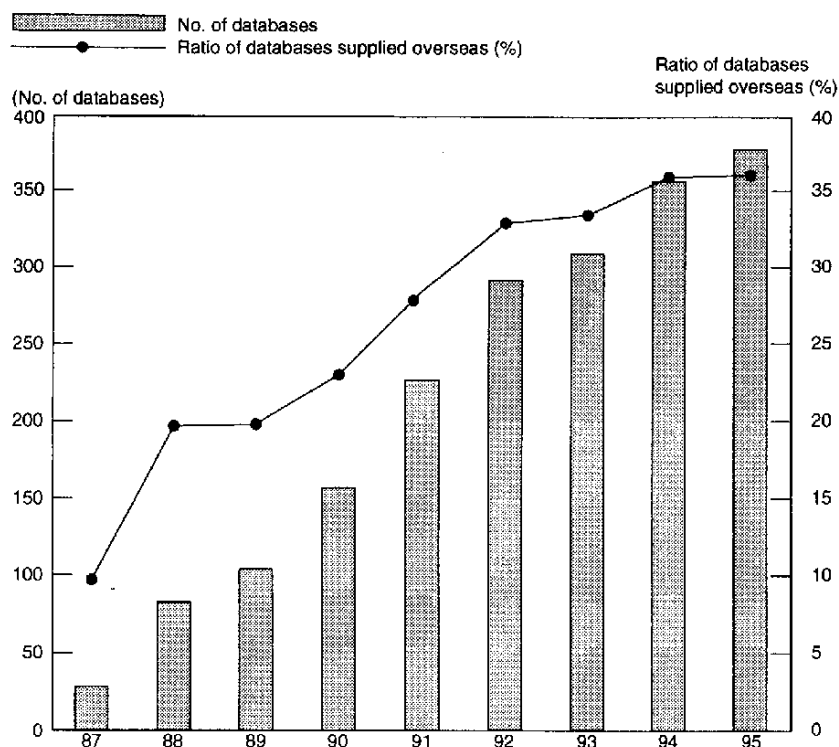


Figure III-20 Growth of the Number of Databases Supplied Overseas

The distribution of these 377 databases by category consists of 34 in the "Science and Technology" category (9.0%), 151 in the "Economics, business and finance" category (40.0%), 181 in the "General" category (48.0%), seven in the "Economics, business and finance" and "General" categories (1.7%), two in the "Science and Technology" and "Economics, business and finance" categories (0.5%), and two in the "All fields" category (0.5%).

In addition, in looking at the distribution of these databases according to language, there are 250 types in "Japanese" (66.3%), 66 in "English" (17.5%), one in "Other" languages (0.3%), 53 in "Japanese" and "English" (14.1%) and seven in "English" and "Other" languages (1.9%).

With respect to supply form, 281 databases are supplied "On-line" (74.5%), 35 by "MT (magnetic tape)" (9.3%), 10 by "CD-ROM/CD-I" (2.7%), 27 "On-line" and by "MT (magnetic tape)" (7.2%), three "On-line" and by "CD-ROM/CD-I" (0.8%), 20 "On-line" by "MT" and by "CD-ROM/CD-I" (5.3%), and one by "MT (magnetic tape)" and "CD-ROM/CD-I" (0.3%).

IV Present State of Use of Commercial Databases

1. Summary

According to the results of the "Survey of Japanese Database Services (User Edition)" conducted by DPC in September 1995, an average of 63.7% of the replying companies indicated that they are currently using databases. When this is looked at in terms of company size, 41.3% of small and medium-sized businesses and 70.7% of large companies are using databases. By industrial category, oil and chemical companies lead the way at 87.5%, followed by business service companies at 76.6%, construction companies at 72.7%, and finance and insurance companies at 70.0%.

2. Usage Results and Forecasts

(1) Annual Monetary Amount of Database Usage

Table IV-1 indicates the 1994 results for the annual average monetary amount of database usage per replying company by company size as determined in this survey, along with the scheduled amount of usage in 1995. To begin with, the overall average of the ratio of domestic database usage to overseas database usage on a monetary basis was approximately 7:3 for 1994, indicating an increase in the proportion of overseas database usage from past figures.

Next, in looking at the average monetary amount of database usage by company size, small and medium-sized businesses spent ¥3.188 million per company, while large companies spent ¥47.585, thus indicating an approximately 15-fold gap between the two. According to the outlook in 1994 from the previous survey, both small and medium-sized businesses, as well as large companies exhibited a decreasing trend. However, the results of actual tabulations one year later reveal that database usage has grown on average by 17.9% from the previous year among small and medium-sized businesses, and 16.3% among large companies, increasing in a manner that precedes an economic recovery. In the case of small and medium-sized businesses, in particular, the decreases in expenditures over the past two consecutive years came to an end, returning to a level comparable to 1992.

According to this year's survey, companies are still taking a stern view with respect to the outlook for 1995. Although only use of public services exhibited an increase, of 11.6%, small and medium-sized business are expecting a slight increase of 2.3%, while large companies expect a slight decrease in database usage (2.3%).

In looking at the 1994 results for the average monetary amounts of database usage by industrial category, the amount for "finance and insurance" far outdistanced other categories, at ¥552.341 million. This category was followed by "Other manufacturers", at ¥33.422 million, "Commerce", at

**Table IV-1 Annual Average Monetary Amount of Database Usage
per Company by Company Size**

(Unit: ¥10,000)

Company size	1994 Results (N=368)			1995 Forecasts (N=374)		
	Japanese databases	Overseas databases	Total	Japanese databases	Overseas databases	Total
Small and medium-sized businesses	230.7 (72.4)	88.0 (27.6)	318.8	238.8 (3.5)	87.4 (- 0.7)	326.2 (2.3)
Large companies	3,354.0 (70.5)	1,404.5 (29.5)	4,758.5	3,343.0 (- 0.3)	1,307.2 (- 6.9)	4,650.2 (- 2.3)
Public service	169.6 (85.9)	27.8 (14.1)	197.4	186.0 (9.7)	34.3 (23.4)	220.3 (11.6)
Average of secondary industry	1,298.3 (79.9)	325.9 (20.1)	1,624.0	1,378.8 (6.2)	317.0 (- 2.7)	1,695.8 (4.4)
Average of tertiary industry	5,541.1 (67.5)	2,669.9 (32.5)	8,211.0	5,128.2 (- 7.5)	2,339.0 (- 12.4)	7,467.2 (- 9.1)
Overall average	2,374.8 (70.7)	985.2 (29.3)	3,360.1	2,345.5 (- 1.3)	909.3 (- 7.7)	3,254.8 (- 3.1)

Note: Actual numbers shown in parentheses indicate the proportion of Japanese database usage to overseas database usage. Figures in parentheses for forecast use indicate the growth rate from the previous year. Units for both are percentages, and a triangle indicates a negative growth rate.

¥18,500 million and "Other business services", at ¥15,426 million. When compared with the average monetary amounts of the 1993 results in the previous survey, there are five industrial categories that fell below the levels of 1993, and four that surpassed those levels ("Oil and chemicals", "Electrical, general and transportation machinery manufacturers", "Commerce" and "Finance and insurance").

According to the predicted growth rates for 1995, with the exception of "Construction" predicting an increase of 13.8%, increases in other categories are predicted to be only small. There are several industrial categories in which negative growth is foreseen, consisting primarily of tertiary industries.

In looking at these figures by comparing domestic and overseas databases, the average monetary amount of usage per company for all industrial categories excluding "Oil and chemicals" is higher for domestic databases than overseas databases. In addition, in contrast to the results of the previous survey, the average of secondary industries rather than tertiary industries exhibits a greater dependency on domestic databases on a monetary basis. However, in looking at results for each industrial category, "Construction" continues to demonstrate the greatest dependency on domestic databases (93.1%).

3. Types and Contents of Frequently Used Commercial Databases

3.1 Frequently Used Systems and Databases

Table IV-2 shows the top five systems in terms of the monetary amount of usage at each replying company in order of the greatest number of replies. Overall, the systems that were indicated most frequently consisted of Nikkei Telecom (234 replies, 54.7%), JOIS (231 replies, 54.0%), PATOLIS (180 replies, 42.1%), DIALOG (169 replies, 39.5%), STN (98 replies, 22.9%) and G-Search (94 replies, 22.0%), in that order, marking the first time that JOIS broke into the top ranks. Although the top six ranking systems changed somewhat in order, they have remained at the top over the past several years. In addition, domestic systems appear to be dominant overall.

In looking at these figures by company size, the most frequently used systems by large corporations consist of Nikkei Telecom (55.3%), JOIS (51.5%), PATOLIS (50.2%) and DIALOG (39.6%).

Table IV-2 Frequently Used Systems on a Monetary Basis in Order of the Number of Replies (N=428: multiple replies)
(Aggregate of the top five systems on a monetary basis of each replying company)

Rank	No. of replies	Name of service system
1	234	Nikkei Telecom
2	231	JOIS
3	180	PATOLIS
4	169	DIALOG
5	98	STN international
6	94	G-Search
7	56	COSMOS
8	53	ELNET
9	39	TSR
10	34	NICHIGAI-ASSIST
11	25	BRANDY
12	24	NACISIS-IR
13	16	Quick Video-1
14	15	Reuter Monitor Service
14	15	ORBIT
16	14	DIALINE
16	14	MAIN
16	14	NEEDS-IR

In addition, among small and medium-sized businesses, the most frequently used systems consist of JOIS (56.4%), DIALOG and Nikkei Telecom (both 41.8%) and PATOLIS (32.7%). These figures indicate that JOIS and DIALOG are selected by a high proportion of small and medium-sized businesses. The figures for G-Search, Nichigai Assist and STN indicate a similar trend.

In looking at individual industrial categories, Nikkei Telecom is used the most by tertiary industries, at 57.7%. Although it is ranked 4th for the average among secondary industries, it still is selected by 50.0% of those companies. Thus, users of top-ranked systems such as JOIS and PATOLIS are concentrated in secondary industries. In comparison to there being a growing difference between the selection rates in secondary and tertiary industries, Nikkei Telecom is characterized as being used as a wide range of users.

The results of totaling the five most frequently used databases (files) for each replying company are shown in Table IV-3, similar to the previous list of frequently used systems. The top-ranked databases in terms of number of replies coincide with the number of replies for service

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

Rank	No. of replies	Databases
1	204	JICST File on Science and Technology Documents
2	192	Nihon Keizai Shimbun Article File
3	161	Patent/Utility Model File
4	153	COSMOS 2
5	108	TSR-BIGS
6	70	CA
7	66	WPI
8	58	Nikkei Personnel Data Bank
9	46	Asahi Shimbun News Database
9	46	Trade Mark File
11	39	MEDLINE
12	34	WHO
13	33	REGISTRY
14	30	INPADOC
15	28	Nikkei Financial Data
.	.	.
.	.	.

systems.

In this survey, companies were asked for the first time in three years about the number of contracted database service systems. The overall average for all replying companies was 7.4 contracted systems. The averages by company size were 8.8 systems for large companies and 5.2 systems for small and medium-sized companies. In looking at the distribution of the number of contracts, the largest proportion was 10 or more systems, indicated by 20.1% of the replying companies. This was followed by one system at 15.2%, and two systems at 13.8%. Compared with previous results (1992 survey), the proportion of companies contracting with 10 or more systems has increased.

Although the "Survey of Japanese Database Services" is based on the monetary amount of database usage by business users, the rankings according to number of contracted users of on-line information service companies (distributors) according to "Nikkei New Media" (published by Nikkei Business Publications Inc.) are shown in Table IV-4 for reference purposes. This survey is conducted exclusively by this publication twice a year, in January and July, targeted at representative database service companies in Japan.

**Table IV-4 Ranking of On-Line Information Service Companies (Including Distributors) by
No. of Contracted Users**

(Source: Nikkei New Media)

Supplying Companies and Organizations	Name of Services	Description	No. of passwords		Growth Rate (%)
			As of Jan. 1, 1996	As of Mar. 1, 1995	
Nihon Keizai Shimbun, Inc.	Nikkei Telecom, NEEDS-TS, NEEDS-DataGEAR, 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.	85,420	78,656	8.6
G-Search Corp.	G-Search	Newspaper article information, corporate information, magazine and book information, industrial, economic and management information, who's who information, international information, government information, scientific and technical information, etc.	¹⁾ 61,862	²⁾ 37,601	64.5
TKC Corp.	LEX/DB, TPS1000, Daikoku Kusu 95, AUDIT1000, PXI, FX2, Corporate Defense DB, Management DB, FX Easy, Clinic, DAIC2, etc.	Complete text DB of judicial precedents, ordinances, etc., management indicators, corporate legal affairs, management planning, tax payment planning, etc.	56,352	49,810	13.1
QUICK Corp.	QUICK-10, QUICK Video-1, QUICK-FF, QUICK-21 watch/watch II, QUICK-21 Dealer, QUICK-21 Bank Dealer, QUICK-21 Advance, QUICK Indicator Board, etc.	Comprehensive economic information focusing primarily on securities and finance	³⁾ 45,000	³⁾ 47,000	- 4.3
NEC Corp.	C&C-VAN Database	Corporate information, newspaper article information, marketing information, economic information, semiconductor information, etc.	34,800	29,800	16.8
Japan Information Center of Science and Technology	JOIS, JOIS-F, STN- International, NACSIS-IR, NLM, etc.	Science, technology and domestic medical literature database, patent information, research subject information, doctoral theses, researcher directory, research abstract database, medical literature information of the U.S. national medical library, etc.	16,300	15,600	4.5
Kinokuniya Co., Ltd.	DIALOG, Data-Star, QUESTEL, NUMERICA, WESTLAW, JOIS, ASSIST, DIALINE, G-Search, C&C VAN, ELNET, etc.	Medical, chemical, patent and other scientific and technical literature information, business, corporate, newspaper and newly published foreign book information, etc.	15,007	14,630	2.6
Maruzen Co., Ltd.	DIALOG, Data-Star, QUESTEL, LEXIS, Legi-Slate, JOIS, DIALINE, G-Search, Uncover, EL Net, etc.	Scientific and technical literature information, patent information, business and corporate information, law, book and magazine information, newspaper article information, newly published foreign book information, etc.	14,705	14,142	4.0
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 information, overseas information, etc.	9,585	9,240	3.7
Teikoku Databank, Ltd.	COSMOSNET(COSMOS1, COSMOS2, English COSMOS2, CCR, Corporate Declared Income)	Corporate financial information and profiles, English language corporate information, corporate credit survey reports, corporate income statements	6,741	6,252	7.8
Japan Patent Information Organization (JAPIO)	PATOLIS, PATOLIS-INPADOC	Domestic and overseas patent data (60 countries)	6,739	6,352	6.1
Tohan Co., Ltd.	SUPER TONETS	Book information, etc.	6,050	5,450	11.0

Supplying Companies and Organizations	Name of Services	Description	No. of passwords		Growth Rate (%)
			As of Jan. 1, 1996	As of Mar. 1, 1995	
KK Kyodo News Service Japan Information	AP, DJ, Telerate, DJN/R	Financial, stock price and product market information, general article information	4,466	4,400	1.5
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.	4,207	3,988	5.5
Processing Service Co., Ltd.	Infostream (JAPICDOC), medical-related presentation title information, Tomorrow's New Drugs, PHARMCAST, ARIS, KIKAKU NET, MEDX, APLIN, JIP/AMD, CDP, ORBIT	Drug adverse effects and other pharmaceutical information, medical information, dru notification and certification information, standards information, magazine advertising rates, municipal and township data, patent information, etc.	4,150	4,100	1.2
Kokusai Information Service Co., Ltd.	Dow Jones, News / Retrieval. FT Profile, News NET, I/ Plus Direct, Nikkei Telecom, KISPAT, etc.	Domestic and overseas newspaper and magazine article information, corporate information, patent information, etc.	2,700	2,680	0.8
Nichigai Associates, Inc.	NICHIGAI ASSIST	Who's who information, personnel information, book information, magazine article information, etc.	2,086	1,830	14.0
Electronic Library Inc.	ELNET (ELMOR, ELSDI, ELDB, etc.)	Newspaper (51 major domestic newspapers) and magazine (approx. 140 publications) article information, original article image information database	1,920	1,800	6.7
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.	1,508	1,398	7.9
Brandy International Co., Ltd.	BRANDY	Similar trademark searching (character name searching, graphical trademark searching), trademark publication information searching, trademark watching service, trademark official report fax service	1,312	1,218	7.7
Nippon Shuppan Hanbai Inc.	NOCS	Information searching and ordering of books and magazines published in Japan	400 *5)	400	0.0
Tokyo Kantei Corp.	Nationwide apartment and land database	Real estate information	7	70	- 90.0
Total for 22 on-line information service companies (including distributors)			381,317	336,801	13.2

*1): Includes the number of users via personal computer network services connected to gateways

*2): Figures as of January 1, 1995

*3): No. of dedicated terminals

*4): On-line communications and database company established by Toyo Information Systems Co., Ltd., in 1995

*5): Contracts were renewed as a result of changing to a new system in 1995

Source: Nikkei Business Publications, Inc. "Nikkei New Media" (February 19, 1996)

3.2 Categories of Frequently Used Databases

Fig. IV-1 summarizes replies pertaining to categories of frequently used commercial databases, while dividing these into domestic and overseas databases. In the case of domestic databases, the top category is "Newspapers/journals/news" (73.4%). This is followed by "Corporate finance/profiles" (65.5%), "Who's who/organization information" (49.7%) and "Patents" (47.2%).

On the other hand, in the case of overseas databases, the top categories consist of "Patents" (58.2%), "Corporate finance/profiles" (47.8%) and "Medicine/pharmaceuticals/biotechnology/biology" and "Newspapers/journals/news" (both 42.2%). One trend that has remained constant over the past three years is the year-on-year increases in the selection rates of "Newspapers/journals/news" and "Corporate finance/profiles" both for domestic and overseas databases. In addition, selection of domestic databases in categories belonging to the main categories of "General" or "Business" has also increased. This is believed to be the result of a relative increasing trend due to a broad range of users, in contrast with users of databases in categories relating to natural science, such as "Patents" or "Medicine/pharmaceuticals/biotechnology/biology", being relatively limited.

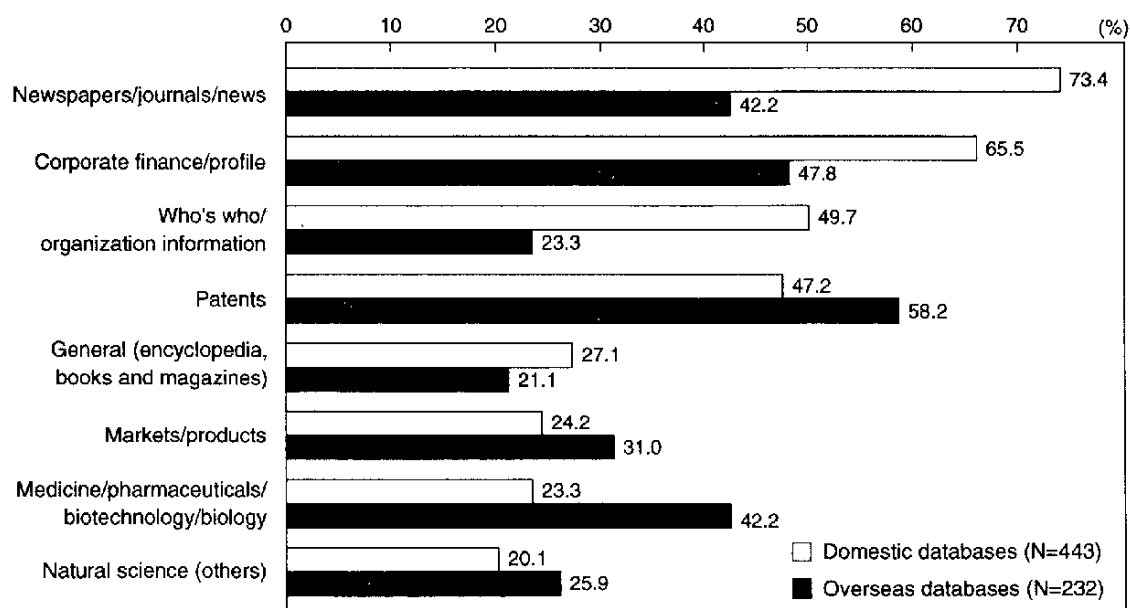


Figure IV-1 Categories of Frequently Used Databases (multiple replies)

3.3 Types of Data Desired to be Used

In this survey, users were asked about the data they desired to use in terms of primary information or secondary information (graphs, directories, etc.) for character data and numerical data, respectively.

As shown in Table IV-5, the reply with the highest selection rate was "Primary information/character data", at 78.4%. In terms of company size, the averages among secondary industries and tertiary industries were both above 70% for this reply. In particular, this was selected at the rate of 92.9% among finance and insurance companies, and 81.8% among construction companies. Specific examples include "Government and official announcement information", "Corporate and related announcement information", "Full text of scientific documents", "Full text of thesis and draft collections", "Records of National Diet proceedings", "Full patent texts" and "Newspaper articles".

The next category having the highest selection rate was "Primary information (numerical data)", at 57.0%. By industrial category, "Oil and chemical businesses" exhibited a selection rate of 75.6%, while "Other business services" selected this reply at the rate of 75.0%. Specific examples of this data that are particularly conspicuous include "Government and official statistical references", "Industrial organization statistics", "Chemical substance properties" and "Corporate information".

Table IV-5 Types of Data Desired to be Used

Types of data	Average of secondary industries	Average of tertiary industries	Overall
Primary information (raw data)/character data	74.5 (%)	79.0 (%)	78.4 (%)
Primary information (raw data)/numerical data	61.3	59.0	57.0
Graphs, directories and other secondary information/character data	38.0	22.9	31.5
Graphs, directories and other secondary information/ numerical data	39.4	30.5	35.1
	(N=137)	(N=105)	(N=305)

Numerical data exhibited a higher selection rate for "Secondary information", at 35.1%. The selection rate for character data was 31.5%. Specific examples of numerical data consist primarily of "Statistics", as might be expected, thus indicating a high demand for graphical information.

3.4 Types of Data Used

Table IV-6 indicates those types of data currently being used or for which an increase is desired in the future for both on-line and off-line utilization.

Table IV-6 Types of Data Currently Being Used or for Which Use is Desired to be Increased in the Future (multiple replies)

	Currently Being Used (N=420)		Usage Desired to be Increased (N=336)	
	On-line (N=412)	Off-line (CD-ROM, etc.) (N=151)	On-line (N=284)	Off-line (CD-ROM, etc.) (N=184)
Text (reference)*	339 (82.3)	105 (69.5)	130 (45.8)	82 (44.6)
Text (fact, character)	286 (69.4)	84 (55.6)	126 (44.4)	76 (41.3)
Numerical	154 (37.4)	35 (23.2)	123 (43.3)	61 (33.2)
Image and graphical (using graphics such as NAPLPS)	41 (10.0)	24 (15.9)	121 (42.6)	68 (37.0)
Image (still pictures, photographs)	25 (6.0)	31 (20.5)	137 (48.2)	84 (45.7)
Video (animation)	1 (0.2)	2 (1.3)	57 (20.1)	39 (21.2)
Voice	1 (0.2)	4 (2.6)	37 (13.0)	21 (11.4)

*: "Reference" refers to secondary information such as directories.

To begin with, the on-line service currently being used that received the most replies is "Text (reference)". This was followed by "Text (fact, character)" and "Numerical", in that order, being no different from the results of the previous survey. In addition, although other on-line types, including "CD-ROM", also exhibited a similar order, "Image (still pictures, photographs)" had a higher selection rate than "Image and graphical", perhaps due to the large amount of chemical and patent data.

Next, with regard to types of data desired to be used or which use is desired to be increased in the future, the selection rate for "Image (still pictures, photographs)" surpassed that of conventional types of data such as "Text" and "Numerical" for both on-line and off-line use, giving the impression of considerable expectations being placed on this type of data. Moreover, on-line data use demonstrated a selection rate of better than 40% for "Image and graphical (drawings)", as well.

3.5 Utilization of Public Data

Questions were asked regarding utilization of databases handling public data (data released by the government and government organizations), as was done in the previous survey. Table IV-7 shows those results. There were 153 replies indicating that public data is currently being used. When the types of data used were divided into character data and numerical data, numerical data was found to be used more frequently, regardless of company size and industrial category (120 of 153 replies: 78.4%). "Corporate-related data" in particular has the highest utilization rate, at 60.1%. This is followed by "General business and industry", at 40.5% and "Domestic economy, business climate and finance", at 36.6%. Character data is used by 61.4% of the replying companies. Utilization rates are lower than numerical data, with "Government white papers and related documents" at 30.7% and "Government reports" at 30.1%. However, it can also be seen from the replies to "Types of data desired to be used" that there is a high demand for character data, suggesting that the cause of the low utilization rates may be an insufficient amount of character data itself supplied in databases.

Table IV-7 Utilization of Databases Handling Public Data

Figures in parentheses indicate ratio to total number of replies (%)

		Currently Using	Desire to Use in Future
Character Data	Government reports	46 (30.1)	134 (48.7)
	Government white papers and related documents	47 (30.7)	131 (47.6)
	Judicial precedents	32 (20.9)	83 (30.2)
	Government committee reference materials	29 (19.0)	90 (32.7)
	Government press conference reference materials	23 (15.0)	72 (26.2)
	City planning documents	12 (7.8)	88 (32.0)
	Other	5 (3.3)	11 (4.0)
Numerical Data	Corporate-related data	92 (60.1)	167 (60.7)
	General business and industry	62 (40.5)	166 (60.4)
	Domestic economy, business climate and finance	56 (36.6)	113 (41.1)
	Population, employment and labor	44 (28.8)	108 (39.3)
	International trade	36 (23.5)	103 (37.5)
	Other	5 (3.3)	7 (2.5)
		(N=153)	(N=275)

On the other hand, a breakdown of the 275 replies to "Currently not using but desire to use in the future" yields nearly equal response rates for character data at 223 replies (81.1%) and numerical data at 226 replies (82.2%). In looking at subcategories, "Corporate-related data" was selected most frequently, at 60.7%. This was followed by "General business and industry" at 60.4% and "Government reports" (48.7%) in third place.

With respect to the manner in which public data is made available, the supplying of information on a government or local government home page on the Internet has recently attracted considerable attention. If a broader range of data is able to be supplied by taking advantage of the opportunity offered by the Internet, utilization is expected to reach the level of the United States and Europe.

4. Rates of Database Utilization Forms

In this survey, companies were asked about their database utilization rates on a monetary basis, divided in the manner indicated below.

- (1) Use of on-line services other than personal computer network services
- (2) Use of database services via personal computer network services
- (3) Use of off-line services by CD-ROM
- (4) Use of other off-line services

Overall, category (1) accounted for more than 70% of domestic database usage and more than 80% of overseas database usage. This represents a slight increase over the results of the previous survey. Accompanying this, use via personal computer network services of category (2) decreased (domestic: 23.9→19.7%, overseas: 12.8→7.4%), exhibiting an opposite trend from the previous survey. However, in looking at the forecast for 1995, since expected use by personal computer network services indicates a slight increase, this category is considered to presently be in a period of fluctuation.

In addition, although the off-line rate, obtained by combining categories (3) and (4), is only roughly 10% for both domestic and overseas databases, the utilization rate of domestic databases by CD-ROM has doubled from the level of the previous survey.

Table IV-8 Database Utilization Rates

	1994 Results		1995 Forecast	
	Domestic	Overseas	Domestic	Overseas
On-line (excluding personal computer network services)	71.1(%)	82.2(%)	69.6(%)	78.9(%)
personal computer network services	19.7	7.4	20.8	9.6
CD-ROM	4.7	7.7	5.3	8.1
Other	4.4	2.8	4.2	3.4
	(N=390)	(N=197)	(N=378)	(N=200)

5. Issues on Pricing and Utilization

5.1 Pricing Issues

Domestic databases were evaluated as being "Expensive" by nearly 60% and "Reasonable" by just under 40% of the replying companies, on average. Those replying that they are "Inexpensive" accounted for only 1.7%. In addition, those subcategories that were highly evaluated as being "Inexpensive" were predominantly in the "General" category, and included "Newspapers, journals and news". On the other hand, in the case of overseas databases, the overall averages consisted of 56.0% for "Expensive", 40.0% for "Reasonable" and 4.0% for "Inexpensive", thus indicating a slight difference in comparison with domestic databases.

5.2 Impressions of Recorded Information

In continuation from the previous survey, companies were asked about their impressions of information recorded on databases. In the case of domestic databases, the top reply was "Data not updated frequently", at 31.0%. This was followed by "Presence of desired information unclear", at 27.0%, and "Not recorded in full text", at 25.8%. A similar selection of "Low number of information entries" was indicated by 21.7% of the replying companies.

With respect to overseas databases, the top reply was "No particular dissatisfaction", at 34.3%. The next most common reply was "Presence of desired information unclear", at 29.1%. Although "Information inaccuracy" was selected by 27.3% of the replying companies, this was the most frequently selected impression for overseas databases in the previous survey.

Overall, there is a large discrepancy between domestic and overseas databases with respect to evaluation of "Updating frequency", "Number of information entries" and "Output form patterns".

5.3 Problems with Commands, Functions and Operability

In this section, the survey focused on problems relating to the commands, functions and operability of database services. Among the 413 replying companies, 65.6% indicated "Inconsistent commands", which again took the top spot, as in previous years. This was followed by "Slow search speed" (33.7%) and "Need for a comprehensive thesaurus" (32.9%), thus indicating a change in order from the previous survey. Although "Need for a comprehensive thesaurus", in particular, has gradually increased over the past few years, the results in this survey were 10 points down from the results of the previous survey.

6. Database Utilization by Personal Computer Network Services

Firstly, 433 of 699 replies (61.9%) that stated that personal computer network services are being used, corresponding to an increase of more than 10 points from the previous survey.

In looking at these results by company size, 43.4% of small and medium-sized companies are using PC network services, while the number for large companies increased by 15 points, surpassing the 70% mark (70.3%). In terms of industrial category, the highest utilization rate was demonstrated by "Data processing and information services", at 77.0%. This was followed by "Construction" at 75.0%. This order is the same as in the previous survey. Conversely, the lowest utilization rate was found to be in "Iron and steel, non-ferrous metal and metal manufacturing industries", at 41.9%. This utilization rate is steadily increasing each year, however. Although utilization among secondary industries (63.2%) and tertiary industries (67.2%) is dropping, these levels still increased by more than 10 points over the previous survey.

The most frequently used personal computer network services consist of "NIFTY-Serve" (87.9%), "PC-VAN" (19.9%) and "Nikkei MIX" (6.3%). The concentration of usage in "NIFTY-Serve" is growing each year. This same trend is found regardless of company size and industrial category.

With respect to the most frequently used menus of personal computer network services, the overall leader is "Electronic mail" (65.7%). This is followed by "Database" (56.8%), indicating a reversal of the results of last year's survey (Table IV-9).

In looking at company size, use of "Electronic mail" accounts for nearly 70% of all personal computer network use among small and medium-sized companies, while "Electronic mail" and "Database" are used at about the same frequency at large companies.

Table IV-9 Frequency of Use of Personal Computer Network Service Menus (multiple replies)

	Small and medium-sized businesses	Large companies	Total
	(%)	(%)	(%)
Electronic mail	67.2	65.8	65.7
Database	37.7	61.7	56.8
BBS (electronic bulletin board)	37.7	30.2	32.6
Electronic conferences	6.6	17.4	16.9
Transaction services	4.9	4.4	3.8
Other	8.2	6.7	6.3
	(N=61)	(N=298)	(N=426)

7. Utilization of the Internet

It seemed that the year 1995 started and ended with the Internet. Although the number of Internet users is still growing at an explosive pace, it appears that it would be useful to try to obtain an understanding of actual usage trends. Continuing from last year's survey, questions were therefore asked about the Internet.

Among the 700 companies replying to this question, the Internet is currently being used by 257(36.7%). In terms of actual numbers, this represents an increase of 250% from the previous survey, and, as a percentage, an increase of 22 points. On the other hand, 260 companies indicated that they were not using the Internet now but desire to use it in the future (37.1%). Those industrial categories having the highest utilization rates consisted of "Other business services" (50.0%), "Data processing and information supply services" (48.4%), "Electrical, general and transport machinery businesses" (36.2%) and "Oil and chemical businesses" (36.1%). In addition, when looking at the figures by company size, the Internet is being used by 15.4% of medium and small-sized businesses, 41.1% of large companies and 46.0% of public services.

With respect to desiring to use the Internet in the future, the difference between small and medium-sized businesses and large companies was not that great. However, the trend for industrial category is similar to that of the previous survey. Namely, the level of interest in installing the Internet among "Finance and insurance businesses", "Commerce" and "Iron and steel, non-ferrous metals and metal manufacturing industries" is not that high, which includes the reply of "No need to use in the future".

Companies were also asked about their purposes (or planned purposes) for using the Internet, the results of which are shown in Table IV-10. Among the 255 companies that are currently using the Internet, the most frequently indicated purposes of use consists of "Electronic mail" (80.8%), "Information acquisition from home page" (78.0%), "Information transmission by creating home page" (43.5%), "File transfer" (44.3%) and "News services" (42.4%). Among the 241 companies desiring to use the Internet in the future, the most frequently stated purposes of use are "Electronic mail" (61.4%), "Information acquisition from home page" (59.8%), "Information transmission by creating home page" (41.9%), "File transfer" (26.1%) and "Non-commercial database searching" (29.0%), indicating about the same order as in the case of companies currently using the Internet. Although the replies pertaining to home pages cannot be compared with the previous survey, it appears that the primary objective of using the Internet is to acquire information.

Table IV-10 Purposes of Using the Internet (multiple replies)

Purpose	Currently Using	Desire to Use in Future	Overall
Electronic mail	80.8(%)	61.4(%)	71.4(%)
Information acquisition from home page	78.0	59.8	69.2
Information transmission by creating home page	43.5	41.9	42.7
File transfer	44.3	26.1	35.5
Non-commercial database searching	39.6	29.0	34.5
Electronic news services	42.4	22.0	32.5
Remote log-in	24.3	5.4	15.1
EDI (Electronic data interchange)	10.6	14.9	12.7
Commercial database searching	6.3	13.7	9.9
Public release of thesis research results	10.6	8.3	9.5
Other	3.1	1.2	2.2
	(N=255)	(N=241)	(N=496)

With respect to the merits of using the Internet, the difference between companies using it and those not using it is not that large (Table IV-11). However, the rates are higher for companies currently using the Internet. Those replies that most accurately reflect those merits are "Savings on communication costs", "Ease of gathering information" and "Users can easily become information suppliers".

Table IV-11 Merits of Internet

Merits	Currently Using	Desire to Use in Future	Overall
Ease of gathering information	79.4(%)	70.9(%)	75.2(%)
Users can easily become information suppliers	64.0	51.8	57.9
Savings on communication costs	40.7	26.3	33.5
Data downloading	34.0	21.1	27.6
Simple processing of acquired information	21.7	16.7	19.2
Other	5.9	3.2	4.6
	(N=253)	(N=251)	(N=504)

Finally, with respect to problems concerning Internet utilization, the greatest concern is over "Security" (80.7%), as in the previous survey. When this is combined with the number of companies that selected "Lack of clarity about liability when a failure occurs", at 41.9%, there appears to be a considerable degree of apprehension regarding the network itself (Table IV-12).

When this point is looked at in terms of company size, it is indicated at a higher rate by large corporations. The next most commonly indicated problems are "Protection of copyrights", at 39.0%, and "No comprehensive index system", at 28.3%, which indicate a growing awareness of Internet-related problems.

Table IV-12 Problems Concerning Internet Utilization

	Small and Medium-Sized Businesses	Large Companies	Overall
Security	67.0(%)	83.6(%)	80.7(%)
Lack of clarity about liability when a failure occurs	34.8	44.6	41.9
Protection of copyrights	31.3	36.2	39.0
No comprehensive index system	30.4	26.2	28.3
Lack of standardization of information	22.6	21.5	22.2
No comprehensive directory	22.0	19.0	20.1
Low information reliability	24.3	21.0	19.7
Other	7.0	3.3	4.9
	(N=115)	(N=390)	(N=618)

8. Questions Relating to CD-ROM

8.1 Utilization of Information on CD-ROM

Those companies that replied that they are currently using commercial information on CD-ROM (including databases) accounted for 182 of the 694 replying companies (26.2%), corresponding to an increase of five points from the previous survey. Utilization rates by industrial category consist of "Oil and chemical industry", with the highest rate at 48.6%, followed by "Other manufacturing industries", at 34.1% and "Public services", including educational institutions, libraries and so forth, at 33.1%.

In addition, 266 of 486 replying companies indicated they planned to use CD-ROM in the future regardless of whether or not they are using CD-ROM now (54.7%). This also represents a slight increase from the previous survey. In looking at the results by industrial category, "Construction businesses" were ranked at the top, at 64.3%, followed by "Electrical, general and transport machinery businesses", at 62.8%, and "Other manufacturing industries", at 60.3%.

8.2 Categories of Information Use

Fig. IV-2 is a graph of the categories of information currently used on CD-ROM. Although the most frequently used category of information is "Science, technology and patents" (37.8%), the selection rate for this category decreased from the previous survey. This is followed by "Dictionaries, encyclopedias and directories" (27.8%) and "Book, magazine and periodical information" (25.0%).

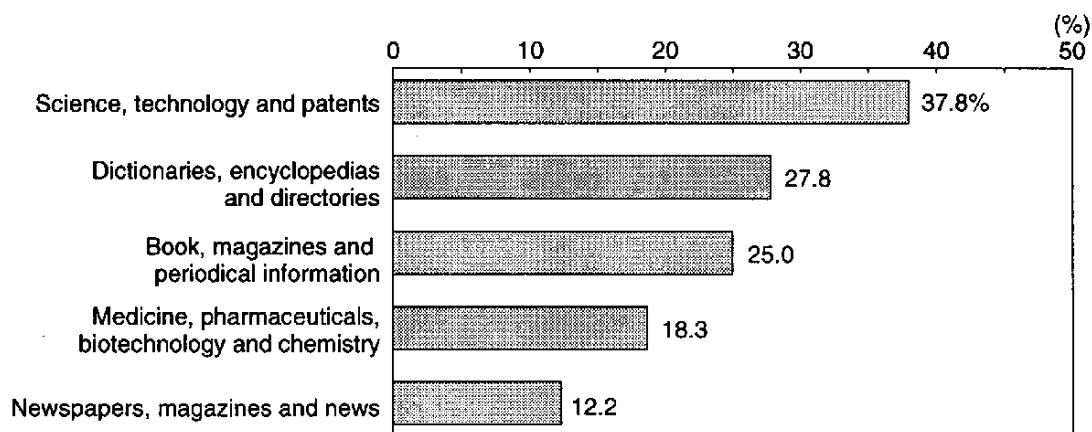


Figure IV-2 Information Categories Frequently Used on CD-ROM (N=180: multiple replies)

8.3 Currently Used CD-ROM Software

Table IV-13 shows the results of asking companies about specific examples of CD-ROM software currently being used. There has been little fluctuation in these results each year. Of the 134 replying companies, the top-ranked "Unexamined patent applications" is used by 62 companies (46.3%). This is followed by "Unexamined utility model applications" at 36.6%, indicating results that coincide with the replies to questions pertaining to the categories of information used described above.

Table IV-13 Currently Used CD-ROM Software (N=134: multiple replies)

Rank	No. of Replies	CD-ROM Software
1	62	Unexamined Patent Applications
2	49	Unexamined Utility Model Applications
3	40	KOJIEN
4	28	J-BISC
5	22	MEDLINE
6	18	Scientific and technical journal general catalog
7	14	Current Contents
8	11	CD-HIASK
8	11	Legal precedent literature information
10	10	DIALOG ON DISK

V State of Personal and Home Utilization

1. Summary

In November 1995, DPC conducted a "Survey of the State of Personal and Home Database Utilization" targeted at users of personal computer network services.

A characteristic of the results of the current survey was the rise of "CD-ROM" into 2nd place, passing "Direct access of on-line database" for the method of accessing databases. In the previous survey (November 1994), although "CD-ROM" was ranked 2nd as the media desired to be used in the future, that prediction became a reality during this past year.

In addition, in the categories of frequently used commercial databases, the newly established category of "CD-Video software information" accounted for 9.8% of the replies, placing it in the top three. These results illustrate that, in addition to conventional printed media, electronic media are playing an increasingly large role in information distribution.

Moreover, the number of persons having experienced using the Internet increased dramatically to 50.0%, from 26.3% in the previous survey, supporting the current high level of enthusiasm with respect to the Internet.

2. Trends of Personal Utilization

1,869 persons of the 2,999 respondents, corresponding to 62.3%, indicated they had experience using a commercial database (including CD-ROM and electronic books).

2.1 Slight Decrease in the Proportion of Personal Use

The 1,869 persons that had experience using a commercial database were then asked the purpose of that use by having them choose from the five selections of "for work only", "mainly for work but also personal use", both for work and personal use roughly equally", "mainly for personal use but for work also" and "for personal use only".

Overall, the number of respondents selecting purposes consisting primarily of personal use (total of "mainly for personal use but for work also" and "for personal use only") totaled 40.9%, representing a slight decrease from the level of 41.7% in the previous survey.

2.2 Utilization Time at 18 Minutes per Week

With the exception of those persons who indicated that their purpose of using commercial databases was "for work only", 1,403 persons indicated that they had experience using a commercial database at the personal level even though there are differences in the degree of that use. These people were then asked about how much time they use databases per week. As a result, 68.2% of the respondents use commercial databases for less than 30 minutes, 10.0% for less than one hour, 2.4% for less than three hours and 0.6% for three hours or more. Thus, there are no major differences from the results of the previous survey. When the average amount of usage time per person is calculated, the result is 0.3 hours (18 minutes) per week.

2.3 CD-ROM Moves Up to 2nd Place

The above-mentioned 1,403 users were then asked to list three media they use when using commercial databases for personal use. Those results consisted of "Access via personal computer network services", at 92.7%, "CD-ROM", at 17.7%, "Direct access of on-line database", at 16.3%, "Electronic books", at 5.5% and "Magnetic tape/floppy discs", at 3.7%.

"Access via PC network services" again obtained by far the highest response rate, as in previous surveys. In the previous survey, the next two positions consisted of "On-line databases", at 16.9% and "CD-ROM", at 11.3%. Thus, the results of this survey indicate that 2nd and 3rd places have reversed. Moreover, when all respondents were asked to list three types of media used when using commercial databases for personal use in the future, the results were "PC network services", at 88.4% (previously 90.8%), "CD-ROM", at 32.9% (previously 26.1%) and "On-line databases", at 27.6% (previously 24.8%), thus exhibiting further increases in the support rates for both media.

Naturally, utilization via personal computer network services is also a form of on-line database utilization, and in contrast to package-type utilization, on-line utilization continues to remain the main form of use.

2.4 CD/Video Information Ranked in the Top Three

The top three categories used most frequently during personal use of commercial databases have consisted of article searching, book information and corporate information in the past two surveys. When a new selection in the form of "CD/Video software information" was added in this year's survey, it suddenly appeared in the top three.

The results of asking 1,403 persons who use commercial databases as individuals to select three categories of commercial databases used most frequently from 20 possible choices are shown in Fig. V-1. CD/Video software information and education/culture were newly added as

possible choices in this year's survey.

The top three categories in the previous survey were "article searching", at 23.7%, "book information", at 16.5% and "corporate information", at 12.0%. The percentages for all three of these categories are decreasing. Although a simple comparison cannot be made since two new categories were added, it cannot be denied that the categories of commercial databases used by individuals are becoming increasingly diverse.

In looking at the top three by occupation, general employees (clerical work), general employees (sales work) and self-employed persons listed the top three categories as "article searching", "book information" and "corporate information". Although the order was the same for professionals, resort and tourist information was also tied for 3rd. Students, general employees (technical work) and public servants listed the top three as "article searching", "book information" and "CD/video software information", exhibiting the same trend as that demonstrated overall. With respect to other occupations, the order given by teachers was "book information", "article searching" and "education/culture", that given by part-timers was "book information", "article searching", and "CD/video software information" and "resort and tourism information", while that given by housewives was "book information", "quizzes, games and fortune-telling", and "article searching" and "shopping, seat reservations, etc".

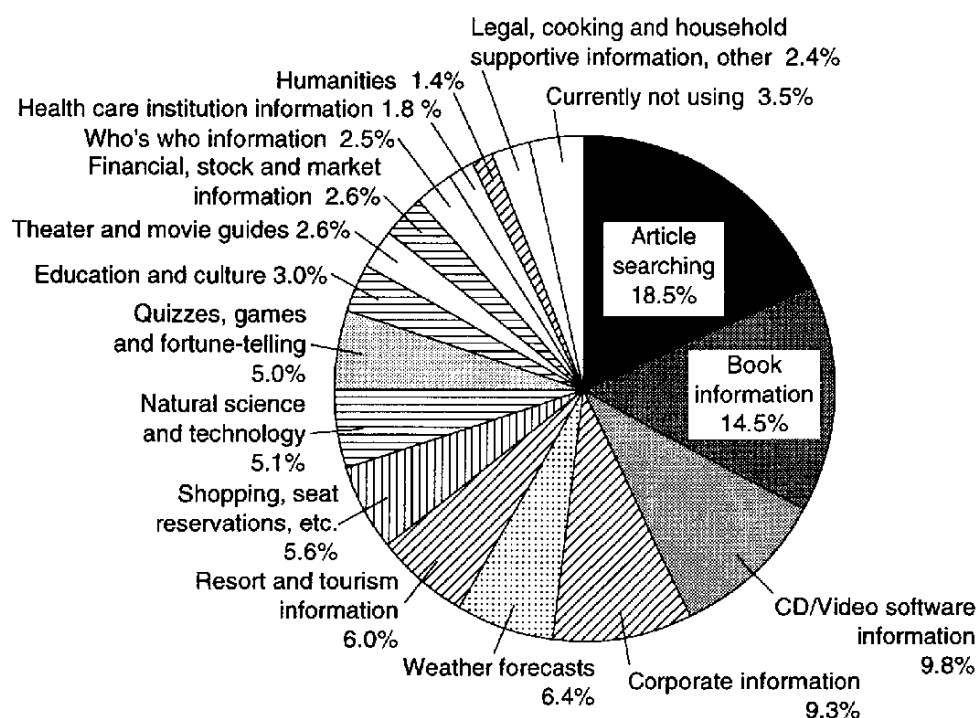


Figure V-1 Categories of Frequently Used Databases (Percentages with respect to total no. of replies)

In this survey, respondents were asked to describe in more detail their reasons for selecting the top three categories of "article searching", "book information" and "corporate information" as determined in the previous two surveys.

To begin with, with respect to "article searching", the subcategories having the highest frequencies of use consisted of "corporate and industrial information" (26.9%), "social and domestic information" (22.9%) and "natural science and technology information" (19.8%). In terms of industrial categories, general employees overall and self-employed persons most frequently used "corporate and industrial information", part-timers and housewives use "social and domestic information", professionals, public servants and teachers use both "natural science and technology information" and "social and domestic information".

Next, with respect to "book information", the most frequently used subcategories are "new publication guides", at 31.4%, "bibliographies", at 21.9%, and "technical journal information", at 18.5%. Although "new publication guides", was the top reply among all occupations, the second-ranked subcategory was "technical journal information" among students and professionals, and "bibliographies" among other occupations.

The most frequently used subcategories of corporate information consisted of "corporate profiles", at 27.3%, "corporate new product information", at 12.3% and "corporate financial data", at 10.1%. Although "corporate trends" ranked 2nd, at 13.0%, in the previous survey, this subcategory fell in rank to 9.3%, while those replies indicating that it is not currently used at all exceeded 50%.

In addition, respondents were asked to select the three most frequently used commercial databases among 17 commercial databases currently offering service. The top 10 databases are shown in Table V-1. Although JICST files, previously ranked 10th, fell out of the top 10, other domestic STM (science, technology and medicine) files took their place.

Moreover, when databases used by the respondents were divided into domestic and overseas databases, domestic only was selected at a rate of 71.0%, mainly domestic at 14.5%, both domestic and overseas equally at 2.3%, mainly overseas at 1.8% and overseas only at 0.1%. In comparison with the results of the previous survey, in which replies of domestic only accounted for 78.0% of the total and the number of persons who have used an overseas database accounted only for 13.2% even when those replying "mainly domestic" were included, the findings indicate a slight increase in the use of overseas databases.

Table V-1 Frequently Used Databases (multiple replies)

(Figures in parentheses indicate results of previous survey;
Breakdown of no. of respondents: 1,403 (1,188) persons)

Rank	Database	No. of respondents		Ratio (%)	
1 (1)	Asahi Shimbun News Database	374	(400)	26.7	(33.7)
2 (2)	Nikkei Shimbun News Database	243	(229)	17.3	(19.3)
3 (3)	Nichigai Assist	181	(208)	12.9	(17.5)
4 (5)	Yomiuri Shimbun News Database	153	(150)	10.9	(12.6)
5 (4)	Tokyo Shoko Research	152	(154)	10.8	(13.0)
6 (6)	Mainichi Shimbun News Database	148	(140)	10.5	(11.8)
7 (7)	Other newspaper article files	93	(113)	6.6	(9.5)
8 (8)	COSMOS	90	(112)	6.4	(9.4)
9 (-)	Other domestic STM (science, technology, medicine) files	56	(35)	4.0	(2.9)
10 (9)	Nikkei Who's Who	53	(68)	3.8	(5.7)

Note: Ratios decreased due to the effect of "Other" at 9.5% (3.9%).

2.5 Secondary Information Occupies Upper Ranks

The next objective of the survey was to determine what categories of information are required during personal use of commercial databases. The total of 2,999 respondents, including those who have never used a database, list three categories that they desire to use in the future, as shown in Fig. V-2. In the previous survey, although "shopping, seat reservations, etc." was ranked at the top with "book information" at 13.7%, this category fell to 4th place in the current survey. In addition, although four categories, consisting of "article searching" and "resort and tourism information" in addition to the above two categories, accounted for nearly 50% of the total in this year's survey, roughly the same percentage was obtained for five categories as a result of adding "CD/video software information".

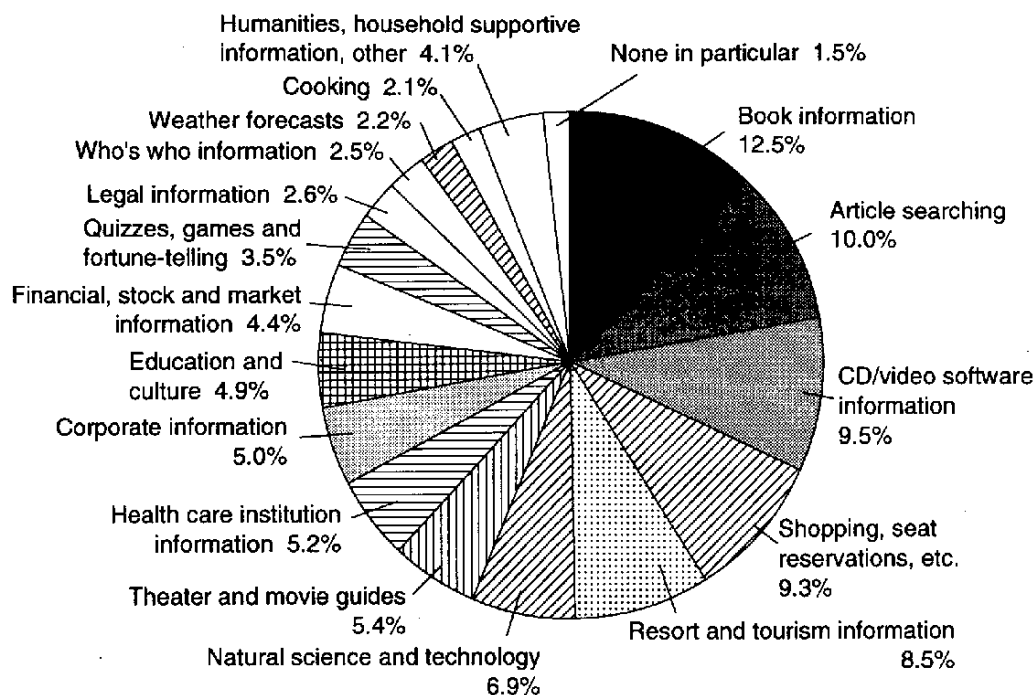


Figure V-2 Categories Desired to be Used
(Ratio with respect to total no. of replies: 6,979)

Examining frequently used categories and categories desired to be used at the personal level accurately expresses the characteristics required by databases.

The first characteristic is the extremely high weight placed on entertainment and other types of recreational information. In addition to "shopping, seat reservations, etc.", "resort and tourism information" and "theater and movie guides", "reading" and "video viewing" not of a practical nature are also forms of recreation. When "book information" and "CD/video software information" are also included in the count, the selection rate of recreational information approaches nearly 50%. As lifestyles become more affluent and people tend to seek mental satisfaction rather than material satisfaction, recreation and leisure activities become a part of their lives. It is only natural therefore that information is sought that enables people to make the most of their resources and time.

The second characteristic observed in the results of this year's survey is that secondary information, like "book information" and "CD/video software information", namely reference databases, account for the top-ranking selections. This is in sharp contrast to business use by corporations, which concentrates primarily on fact databases such as those containing newspapers, journals and news, corporate information, corporate finance and patents. In addition to the huge amount of information transmission by means of conventional printed media, information distribution by electronic media has also become active. Amidst the current situation

of so-called "information overload", the importance of secondary information is expected to become even greater in the future as a means of encountering information that is needed.

3. Requests to Commercial Databases

Although the amount of dissatisfaction with commercial databases has decreased somewhat, dissatisfaction with usage fees remains high.

1,403 persons who have used a commercial database as individuals were asked to list three areas in which they are dissatisfied with commercial databases. The "usage fee system" was selected by 67.9% of the respondents (previously 70.1%), "high line usage fees" by 52.0% (51.9%), "more search methods" by 33.9% (33.8%), "faster communication speed" by 15.4% (18.4%), and "greater detail of database contents" by 14.5% (19.9%). "Increased database updating speed", which was not included in the selections of the previous survey, was selected by 15.6% of the respondents in this year's survey.

Although there are 466 persons who have only used a commercial database at work, the reasons why they do not use commercial databases personally consisted of "high usage fees", indicated by 62.7% of the respondents, "no need for personal use at present" by 39.1%, "high line usage fees" by 11.8% and "required data not available" by 8.8%. Moreover, the reasons given by 1,130 persons who have never used a commercial database consisted of "no need to use at present" (43.5%), "high usage fees" (37.8%), "do not know which service is optimal to use" (30.4%), "high line usage fees" (12.2%), and "required data not available" (8.6%).

Problems with fees have been the greatest area of dissatisfaction in all previous surveys. Since some database suppliers have their sights set on business use, which accounts for more than half of all commercial database use, forcing them to operate at severe administration standards with respect to database updating cycle, searching response time and so forth, there are some who are of the opinion that it would be difficult to lower fees. However, it will probably be necessary to make efforts to segregate database usage, such as by opening up database use to individuals during nighttime hours when business use is at a low level by offering lower rates at those times.

4. State of Utilization of the Internet

4.1 Rapid Increase in the Number of Internet Users

Among the total of 2,999 respondents, those who replied that they had used the Internet in the past jumped from 679 persons in the previous survey (26.3%) to 1,499 persons (50.0%) in the current survey. In terms of numbers, the number of users has more than doubled, while the increase as a percentage is also nearly 200%. In addition, the percentage of respondents who indicated they had never used the Internet but desired to in the future was 47.0%, while those who

feel that Internet use is not necessary accounted for only 3.0%. Even though the targets of this survey are users of personal computers, this still represents an extremely large ratio.

In looking at users of the Internet by age group, users outnumbered non-users among people in their early 20s and those from their late 30s to 40 years old. In addition, in terms of occupation, the ratio of Internet users is highest among general employees (technical work, 54.9%), professionals (54.6%) and teachers (50.7%). Although part-timers and housewives compose only a small portion of Internet users, 70% of these people desire to use the Internet in the future. With respect to housewives, in particular, although 40.7% felt there was no need to use the Internet according to the results of the previous survey, this percentage decreased dramatically to only 9.9% in the current survey.

With respect to the method used to connect with the Internet, the most commonly employed methods consist of that from a personal computer network, at 49.1%, from a commercial network, at 35.6% and from a non-commercial network, at 15.2%. In comparison with the results of the previous survey, connection from a personal computer network decreased by roughly 15%, and that decrease resulted in a corresponding increase in connection from a commercial network. During the past year, the number of specialized network providers has increased accompanying the proliferation of the Internet, and their activities will continue to attract attention in the future.

4.2 Increased Usage Primarily from Personal Use

The 2,908 persons that have used the Internet or desire to use it in the future were asked about their purpose for using it, along with the services that they use or desire to use.

For the purpose of use, 62.9% of the respondents indicated that it was mainly for personal use (total for "mainly personal use" and "personal use only") (Fig. V-3). This represents an increase of more than 10% from the previous survey. In looking at the occupations of the respondents, the proportion of personal use has increased for all occupations in comparison with the results of the previous survey.

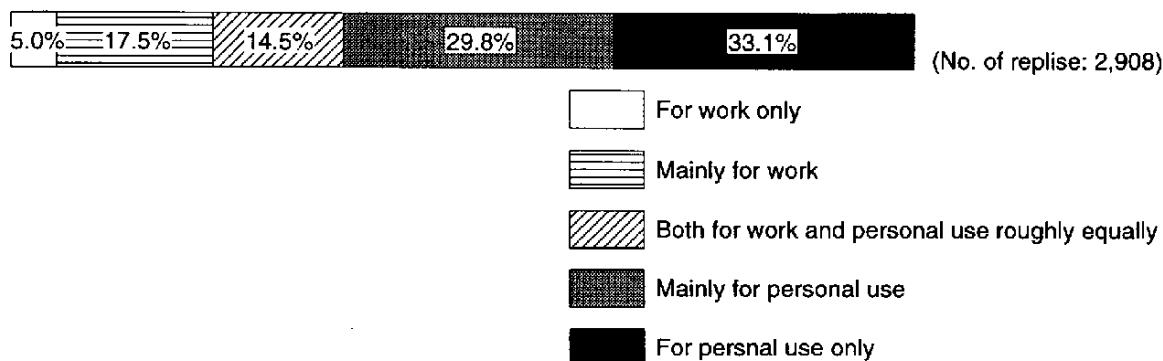


Figure V-3 Purpose of Internet Utilization (No. of replies: 2,908)

In addition, in looking at cross-calculations of the purposes of use of people having used commercial databases and those having used the Internet, in contrast to nearly all people using commercial databases for personal use also using the Internet for personal use, some of the people using commercial databases primarily for work use and the Internet for personal use, indicating here, too, that Internet utilization concentrates on personal use.

In addition, 60% of the respondents indicated that information acquisition from home pages and electronic mail are the most frequently used services (multiple replies). There were a total of 6,096 replies, and a breakdown of those replies is as shown in Fig. V-4.

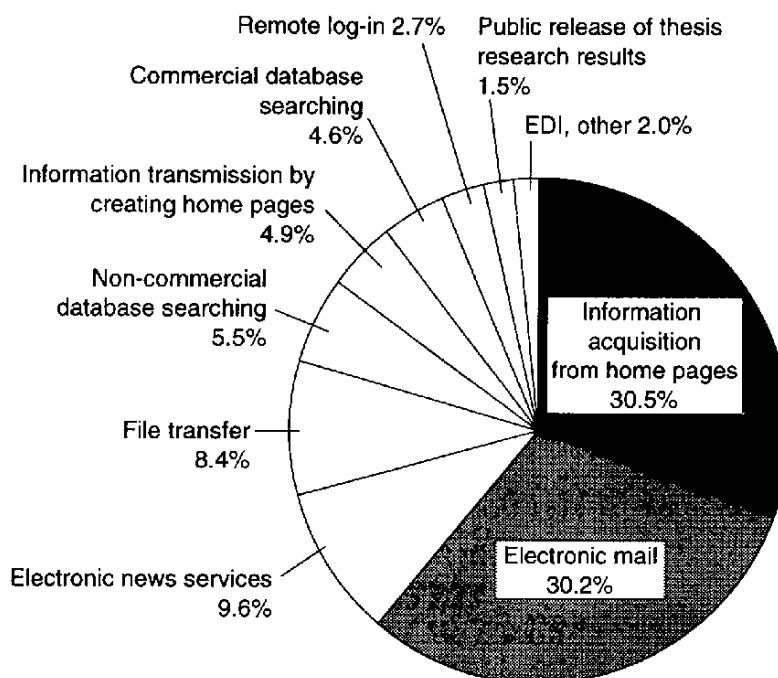


Figure V-4 Services Used with Internet (Ratio with respect to total no. of replies: 6,096)

4.3 Concern Over Security

In looking at a summary of the results of a survey of the merits of using the Internet, the reply of "Users can easily become information suppliers" exhibited an increase of roughly 15%, and, particularly with respect to occupation, general employees (sales work) and self-employed persons listed this as the 2nd-rated merit after "gathering of global information". There are reportedly 50 million Internet users worldwide, and 1.5 million in Japan alone. Being able to transmit information through home pages targeted at these people can be said to make the Internet an extremely attractive public relations and publicity medium.

In addition, according to the results of a survey of all respondents regarding their concerns

about using the Internet, the most common reply was "security". The rate of this reply was highest among users of the Internet.

On the other hand, there was a dramatic increase in the number of replies for "complicated operation", which was the most common reply in the previous survey, at 34.8%.

On the basis of the survey results, there has been a transformation in interest in the Internet over the past year. The Internet has been covered extensively by newspapers, television and other forms of mass media, and the resulting dramatic increase in the amount of information is one of the factors behind its increased utilization. On the other hand, as the number of people familiar with the Internet increases, there is likely to be a deeper awareness of problems with security and other concerns.

VI Project for Promoting Administrative Informatization of the Government

1. Promotion of Administrative Informatization

With respect to the drafting of a plan for administrative informatization of the government, in the final report of the third Ad Hoc Council for Promotion of Administrative Reform of October 27, 1993, a request was made to the government to draft a plan to promote informatization of the entire government that is integrated with plans of individual ministries and agencies, to attempt to improve the level of administrative services to citizens while promoting comprehensive utilization of information between individual ministries and agencies. This requested plan was also to attempt to implement necessary changes in administrative clerical systems corresponding to the development of informatization while systematically and preferentially establishing a foundation for the promotion of informatization based on that promotion plan, in order to promote informatization of the administrative sector based on a medium-range outlook.

In response to this request, in the "Promotion Policies for Administrative Reform in the Future (Abstract)", implemented by cabinet decision on February 15, 1994, the government decided to enact a promotion plan for implementing medium-range and systematic informatization of the administrative sector through each government ministry and agency to aggressively promote informatization of the administrative sector corresponding to the development of information and communication technology, and to aggressively proceed with full-scale studies on the subject. Later, on July 26, 1994, the government decided to implement the "Administrative Informatization Promotion Plan", which summarized the basic philosophy and direction for administrative informatization, in a meeting of the Inter-Ministerial Council of Administrative Information Systems. Finally, the "Basic Plan for Promoting Administrative Informatization" was ratified by cabinet decision in "Current Promotion Policies for Administrative Reform" on December 25, 1994.

Each government ministry and agency drafted its own administrative informatization promotion project based on this "Basic Plan for Promoting Administrative Informatization". With regard to these individual projects, projects were implemented by the first seven ministries and agencies by March 1994 (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), while those of the remaining ministries and agencies were completed by the first part of 1995.

2. Joint Projects and Progress Status

Joint projects drafted separately from the "Basic Plan for Promoting Administrative Informatization" were implemented in March 1995. These consisted of a project relating to the establishment of information systems, a project relating to increased sophistication of administrative services, and a project relating to increased sophistication of information systems.

2.1 Establishment of Information Systems

Matters relating to the establishment of information systems will be carried out as indicated below for the purpose of promoting smooth communications between government ministries and agencies, and achieving sophisticated utilization of administrative information.

(i) A common foundation that enables sophisticated information distribution between ministries and agencies will be clearly defined, and that information distribution will be started as quickly as possible while conducting trial operation of an electronic mail system to serve as the foundation of information distribution between specific ministries and agencies. In addition, required functions will gradually be incorporated in various types of task systems to establish a Kasumigaseki WAN. In 1995, the actual state of the LAN systems of each ministry and agency was determined, and a study was conducted of basic functions of the Kasumigaseki WAN and electronic mail systems. In 1996, the Kasumigaseki WAN and electronic mail systems will be established, and trial operation of the electronic mail system will be conducted between specific ministries and agencies.

The Kasumigaseki WAN employs TCP/IP for the network protocol and X400 for the electronic mail protocol to realize an open interface, distribute various information, and realize reliable communications. Although communications will primarily focus on text data at the beginning of operation, a study of uniform expression forms will be made to realize more sophisticated document expressions. The network structure of the Kasumigaseki WAN is in the form of a star centering around a network operation center. The network lines are connected by dedicated commercial lines. In order to ensure overall security between the Kasumigaseki WAN and the LAN systems of each ministry and agency, the implementation of various security measures has been approved by each ministry and agency.

(ii) Establishment of an Electronic Document Exchange System Between Ministries and Agencies

Establishment and implementation will be carried out in phases while are studied policies for ensuring security and required functions corresponding to the contents of documents exchanged. In addition, a review will be made of document control regulations and related items of each ministry and agency required for electronic document exchange to establish policies and regulations between ministries and agencies. In 1995, technical trends were determined, and a study was made of required functions. In 1996, in addition to proceeding with the establishment

of an electronic document exchange system between ministries and agencies, a prototype system will be established that connects to this system.

(iii) Improvement of Clerical Processing Systems Common to Each Ministry and Agency

The establishment of a cabinet-related clerical support system and a draft circulation and approval system will be conducted first. A review will be made of related regulations to create an information system for secretarial accounting clerical tasks and personnel and payroll-related clerical tasks. In 1995, the required functions of a cabinet clerical support system were studied with the cooperation of the Cabinet Secretariat. In 1996, required preparations will be implemented for establishing an environment that enables electronic exchange of messages between the Cabinet Counsellor's Office and government committees of each ministry and agency.

(iv) Establishment of a Database of Administrative Information Shared by Each Ministry and Agency

Priority will be given to the establishment of databases for white papers, annual reports, survey reports and so forth, followed by studies of uniform system usage. A pilot system will be put into operation based on common specifications at specific ministries and agencies. These databases will then be established at each ministry and agency, while those results are made use of. In 1995, the status of computerization of white papers and so forth at each ministry and agency was determined, and a study was made of uniform system usage. Pilot systems went into operation at MITI and the Ministry of Posts and Telecommunications. In 1996, databases will be gradually established at each ministry and agency based on uniform specifications.

(v) Establishment of a Clearing System for Database Use Between Ministries and Agencies, and Expansion of Mutual Database Utilization

A clearing system will be established and its functions clearly defined. Procedures for mutual utilization of databases between ministries and agencies will also be drafted. In addition, the number of shared databases will gradually be expanded, while attempts will be made to provide more advanced functions.

(vi) Other Matters

Uniform development and supplying of data in the form of a ministerial ordinance database will result in the efficient establishment of databases. In addition, studies will also be made on joint contracts and joint introduction methods regarding policies for use of external databases. A distribution system between ministries and agencies will be established, including the setting of specific transaction prices of computer products, etc.

2.2 Sophistication of Administrative Services

Matters relating to the sophistication of administrative services and related items will be carried out as indicated below in order to raise the level of information supplied to the public as

well as to improve the quality of government services, such as the efficiency of administrative procedures.

(i) Establishment of a Suitable Means of Information Exchange Between the Networks of Government Administrative Agencies and Various Peripheral Networks

Suitable means of information exchange will be established by drawing conclusions as soon as possible while taking into consideration technical measures for ensuring security. In 1995, studies were made of information to be distributed, properties of various peripheral networks, and technical measures for ensuring security.

(ii) Supplying Various Administrative Information to the Public by Electronic Means and Media

Surveys and studies will be conducted of those matters necessary for achieving uniformity and compatibility between ministries and agencies, and procedures for supplying information to the public will be drafted. In 1995, surveys and studies were conducted on matters necessary for achieving uniformity and compatibility, including supply methods and usage fees. In 1996, a review will be made of the document control regulations and related items of each ministry and agency to proceed with studies on procedures for supplying information to the public, including guidelines.

(iii) Establishment of a Clearing System for Social Utilization of Administrative Information

A clearing system will be established after clearly defining its functions, including the range, contents and supply methods of the information supplied. In 1995, the actual state of supply forms, methods and related items at each ministry and agency was determined, followed by a study of system functions. In 1996, the pilot system of an address guidance system will be established.

(iv) Review of Applications, Notifications and Other Procedures Compatible with Computerization and Drafting of Guidelines

Guidelines will be drafted in consideration of the forms of clerical processing at each ministry and agency and the range of administrative objects. Review guidelines were drafted in 1995. In 1996, required measures will gradually be devised at each ministry and agency based on review guidelines.

(v) Other Matters

Studies will be made in terms of services provided for extending the available times of counter services and offering services on holidays by making use of data communications technology. Systematic and organizational conditions will be surveyed for simplification of clerical procedures, including locating various application and notification counters adjacent to each other, unifying procedures and offering one-stop services.

2.3 Sophistication of Information Systems

Matters relating to sophistication of information systems will be carried out as indicated below for the purpose of creating more sophisticated information systems accommodating a greater role of administrative information systems as a foundation for society, the development of end-user computing and wide-range networks.

(i) Drafting of Guidelines for Ensuring the Safety and Reliability of Information Systems and Facilities

Guidelines will promptly be drafted that match the forms of tasks performed while focusing on countermeasures against disasters such as earthquakes based on changes in the circumstances surrounding information systems. In addition, security policies, including systematic aspects, will be surveyed and studied to prevent illegal acts on administrative information systems. In 1995, together with determining the state of implementation of safety countermeasures for individual task forms and analyzing means for ensuring safety and reliability, application policies were studied for each ministry and agency. In 1996, guidelines will be studied that match the form of each task based on the analysis results of the previous year.

(ii) Standardization of Basic Matters, Including Data Codes and Data Items

Required standardization will be carried out together with the establishment of various task systems operated with the Kasumigaseki WAN. Surveys and studies will also be conducted on other standardization matters required for smooth data utilization. In 1995, required code forms and control methods were studied for the electronic mail system and document exchange system used between ministries and agencies. In 1996, required standardization will be performed together with the establishment of the Kasumigaseki WAN and various task systems.

(iii) Proliferation of New Technology and International Standards along with Utilization of External Monitoring and Evaluation

The proliferation of new technology and international standards will be promoted at each ministry and agency through surveys and research on application policies, including the use of an open interface. In addition, pilot projects will be conducted at specific ministries and agencies regarding utilization of external monitoring and evaluation. This external monitoring and evaluation will then be proliferated among each ministry and agency based on those results.

(iv) Drafting of Guidelines for Establishing a System Environment in Terms of Facilities

A study will be made of the desired state of government offices and facilities in accommodation of the progress of informatization, and guidelines will be drafted.

(v) Other Matters

Guidelines for utilization of external resources will be drafted. Estimation guidelines will also be drafted for accurately evaluating the value of software. A study will be made of the desired state of hiring, training and compensating information system essential personnel. Efforts will also be made to substantiate and raise the level of the contents of system-related training.

3. Overview and Implementation Status at Individual Ministries and Agencies

The drafting of administration informatization promotion projects at each ministry and agency was first carried out at seven ministries and agencies, and then sequentially at the remaining ministries and agencies. At each ministry and agency, administrative informatization promotion projects are based on the "Basic Plan for Promoting Administrative Informatization". These projects are prepared after inserting the name of each ministry and agency. Since the contents are the same for each ministry and agency, if progress is not made beyond this point there are many cases in which it is not clear as to what is performed. At each ministry and agency, an action program that actually performs operation is prepared, the contents of which are introduced below for the Management and Coordination Agency, Science and Technology Agency, Ministry of Posts and Telecommunications and Ministry of Construction.

3.1 Management and Coordination Agency

The Management and Coordination Agency inserted a list of important matters to be carried out in 1995 in its basic project, the contents of which are indicated below.

(i) Construction of a Foundation for Promotion of Informatization

- * Begin establishment of an internal department LAN.
- * Conduct trial operation of a WAN between Kasumigaseki and Kudan.
- * Establish a personal computer network between the head office and regional offices.
- * Promote computerization of information while drafting guidelines.

(ii) Establishment of Various Information Systems

- * Use of electronic mail and electronic billboard services for providing guidance concerning the holding of meetings, events and so forth.
- * Study the creation of databases for white papers, reports, etc.
- * Promotion of the creation of a database for terms used in statistics, and establishment of a system for efficient utilization through databases.
- * Increased sophistication of a statistical tabulation system.
- * Study of policies for establishing a database of information concerning permits, approvals and so forth.
- * Development of an information system for administrative consultation members.

(iii) Improvement of Public Services

- * Determine public needs and study important topics relating to supply.
- * Promptly release survey results.

(iv) Review of Document Control Regulations

- * Determine the actual state of matters that can be omitted in terms of implementation, including increasing the range of omissions of official seals and joint seals from intra-agency documents.

(v) Establishment of Information-Related Training

- * Study the desired state of seminars and so forth for improving information ethics, etc..

3.2 Science and Technology Agency

Those matters implemented by the Science and Technology Agency in 1995 are as indicated below.

In improving the level of sophistication and efficiency of administrative clerical tasks, an intra-agency LAN will be constructed and operated in order to establish an information system and raise the level of the working environment. Personal computers were introduced at a rapid pace in 1995 in continuation from similar efforts in 1994. This was carried out based on the active utilization of standard products and general-purpose products, and the creation of an open system with respect to procurement of a LAN, personal computers and other system components.

Connection with external networks is accomplished by connecting the intra-agency LAN to the STA (Science and Technology Agency) network. Together with gathering information using the Internet and other sources, an open system has been built that enables access via public lines and personal computer networks. Accompanying this, a security function has been added to prevent illegal access to internal information. A highly reliable system is to be built that offers a self-diagnosis function and minimal susceptibility to disasters for maintaining communications without causing the functions of the entire system to be interrupted, even when an error occurs in the system. With respect to improving the level of sophistication and efficiency of the Science and Technology Agency, a wider range of databases will be offered to promote sharing of information by agency personnel. A review of utilization of electronic mail and electronic billboards, computerization and document control regulations and related items will be drafted, and trial operations will be implemented starting in 1996.

In improving the level of sophistication of administrative services provided to the public, a home page has been created on the Internet, and public reference materials are supplied to strengthen the supply function of administrative information. In addition, the issuing of white papers by CD-ROM is also being studied. The Agency is also preparing an execution project that involves the establishment of an on-line database and clearing information while also examining its supply methods with respect to off-line information in order to strengthen the supply function of information at related organizations. As a function for directly listening to the opinions of citizens, a mailbox will be established on the Internet that will allow persons to submit opinions and suggestions. A list of those procedures that can be processed by computer, along with a plan for their execution, are being drafted in hopes of achieving greater computerization and "paper-less" processing of administrative procedures.

3.3 Ministry of Posts and Telecommunications

Those matters that have been implemented since 1995 at the Ministry of Posts and Telecommunications are as indicated below.

In order to improve the efficiency of various procedures involving telecommunications administration, procedures have been simplified, and processing speed has been increased by putting all standard document forms on computer and making available license applications, notifications, reports and other forms on-line or on floppy disks. In promoting the supply of information using the Internet and other networks, in addition to white papers and news references relating to telecommunications administration, postal matters, currency exchange, savings accounts, insurance and other these services, statistical data, research results and other publicly available references and data have been computerized and are available on CD-ROM or via the Internet. With respect to efforts to raise the level of clerical processing of telecommunications and postal services by computer to improve the quality of these services, clerical processing has been made more sophisticated and efficient. Moreover, services are being improved, and contributions are being made to local communities in order to improve telecommunications and postal services.

3.4 Ministry of Construction

The Action Program of the Ministry of Construction involved the introduction of approximately 1,200 personal computers in 1995 to realize an environment of one-machine-per person while also establishing a LAN that enabled wide-ranging use of electronic mail and electronic bulletin boards in order to create an environment that would serve as the foundation for computerization of ministerial administrative information and its advanced utilization. Press report materials are supplied to the public using personal computer networks. The Ministry is promoting studies of computerization of procedures, including offering a greater number of approvals and other application forms on electronic media such as floppy disks.

4. Present State of Information Supply by Government Agencies

Government ministries and agencies are promoting the supply of information both in Japan and overseas. The following provides an introduction to the circumstances surrounding the supply of information using the Internet. At present, those ministries and agencies providing services by WWW servers on the Internet include the official residence of the Prime Minister (Fig. VI-1) (URL address: <http://www.kantei.go.jp/jp/server-j.html>) as well as the Economic Planning Agency, National Land Agency, Ministry of Foreign Affairs, Ministry of Education, Ministry of Agriculture, Forestry and Fisheries, Ministry of International Trade and Industry, Agency of Industrial Science and Technology, Ministry of Posts and Telecommunications, and the Ministry of Construction.

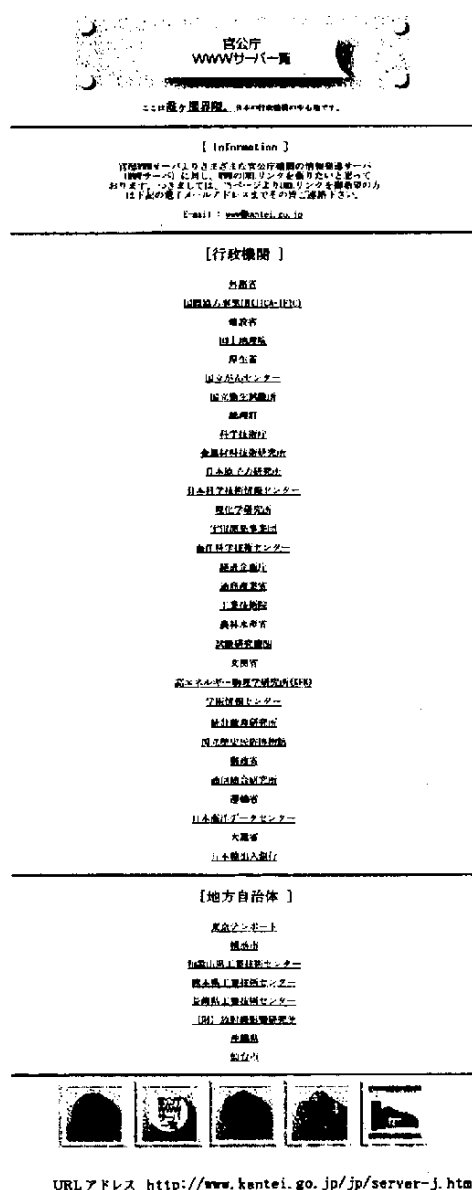
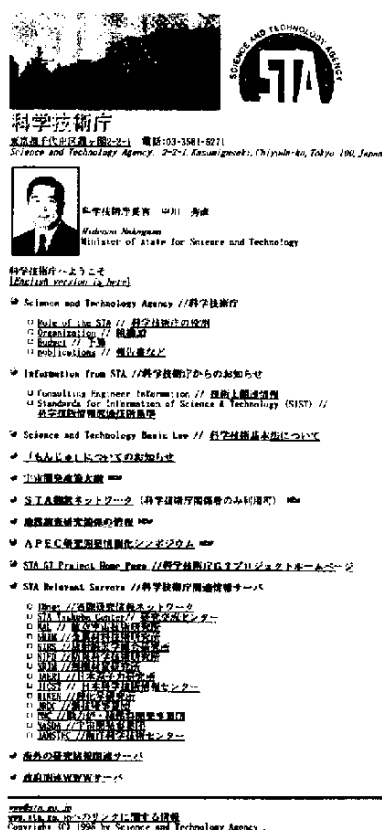


Figure VI-1 Home Page of the Prime Minister's Official Residence

The WWW server of the Science and Technology Agency offers the following information services (Fig. VI-2).

- * Role of the Science and Technology Agency
- * Notices from the Science and Technology Agency
- * Basic science and technology laws
- * Notices concerning "Monju"
- * Space development policy network
- * STA translation network
- * Earthquake survey and research information
- * APEC (Asian and Pacific Economic Council) information
- * Research and development informatization symposium
- * Information on the G7 project of the Science and Technology Agency
- * Science and Technology Agency information server



URLアドレス <http://www.sta.go.jp/>

Figure VI-2 Home Page of the Science and Technology Agency

The WWW server of the Economic Planning Agency offers the following types of information services (Fig. VI-3).

- * Introduction to the Economic Planning Agency
- * Public references available from the Economic Planning Agency
- * Economic charts
- * CD-ROM version of Introduction to the Economic Planning Agency
- * OTO (Ombusman office relating trade and investment), government procurement introductory page
- * Economic planning home page
- * Economic research institute home page
- * Economy and domestic life survey results

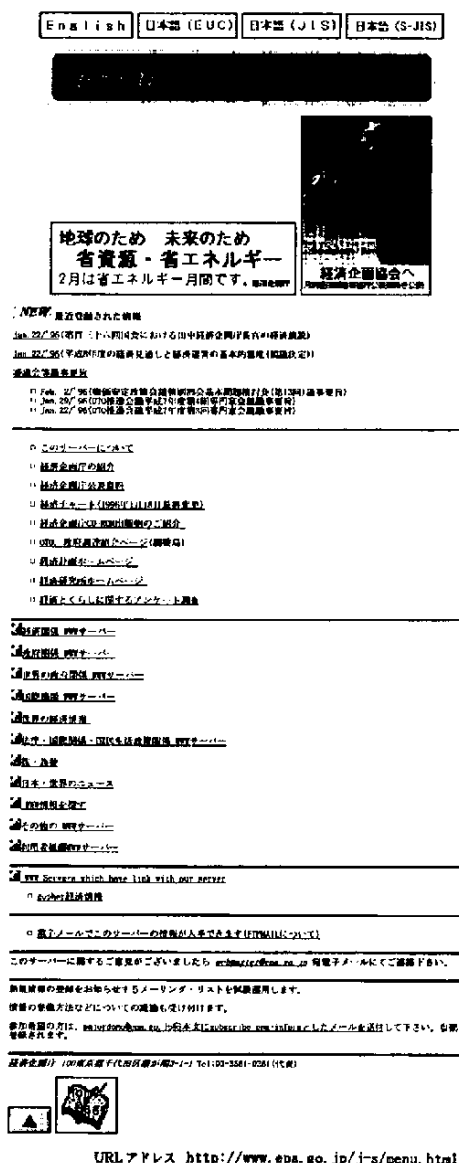


Figure VI-3 Home Page of the Economic Planning Agency

The WWW server of the National Land Agency provides services including summaries, full texts and reference illustrations regarding the grand design for national land use in the 21st century and the basic philosophy behind new nationwide comprehensive development projects (Fig. VI-4).

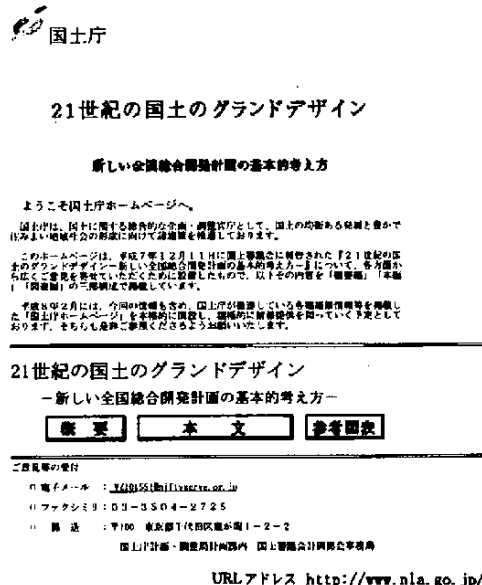


Figure VI-4 Home Page of the National Land Agency

The WWW server at Ministry of Foreign Affairs provides information services like those listed below to fulfill its role of supplying not only domestic information overseas, but more particularly, supplying overseas information in Japan (Fig. VI-5).

- * Information about Japan
- * APEC official home page
- * Overseas information
- * World Cup 2002 information
- * Introduction to the Ministry of Foreign Affairs
- * Ministry of Foreign Affairs and embassy information
- * Ministry of Foreign Affairs web server network

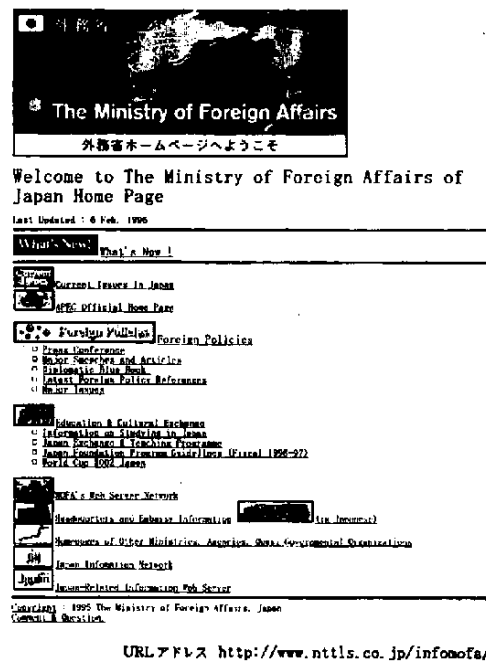


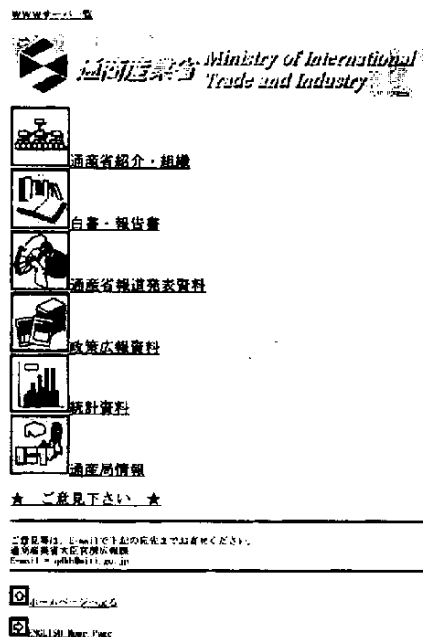
Figure VI-5 Home Page of the Ministry of Foreign Affairs

The WWW server of MITI provides the following information services (Fig. VI-6).

- * Overview and organization of MITI
- * White papers and reports
- * MITI press release reference materials
- * Policy and public relations references
- * Statistical references
- * MITI bureau information



通商産業省工業技術院/
Agency of Industrial Science and Technology
通商産業省工業技術院電子技術総合研究所/
Electrotechnical Laboratory

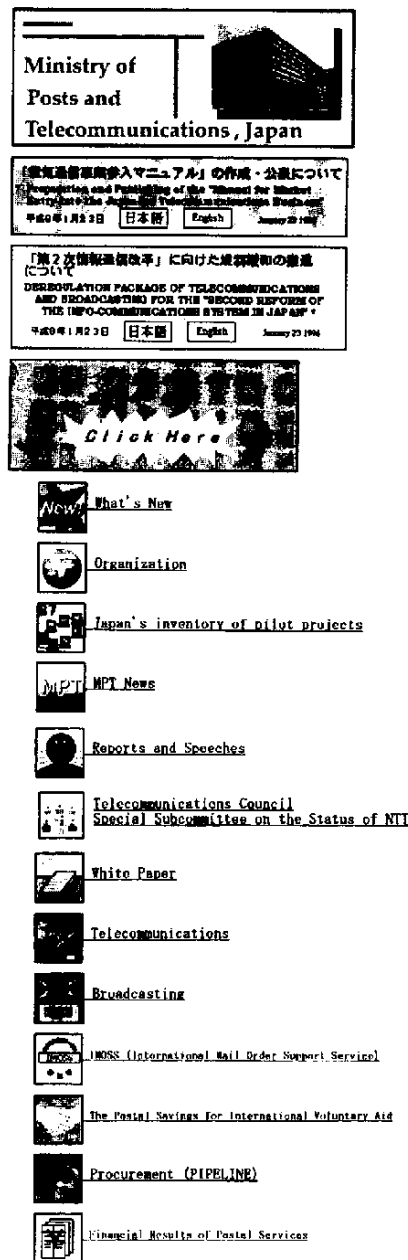


URLアドレス <http://www.miti.go.jp/>

Figure VI-6 Home Page of the MITI

The WWW server of the Ministry of Posts and Telecommunications offers a wide range of information services, examples of which are indicated below (Fig. VI-7).

- * Production and release of manuals for entering telecommunications businesses
- * Promotion of relaxed controls and regulations towards the second information and telecommunications revolution
- * Winning lottery numbers of New Year's postcards
- * Introduction to the Ministry of Posts and Telecommunications
- * Notices from the Ministry of Posts and Telecommunications
- * White papers
- * Correspondence
- * Broadcasts



Please send your comments and suggestions to feedback@mpt.go.jp

URLアドレス <http://www.mpt.go.jp/>

Figure VI-7 Home Page of the Ministry of Posts and Telecommunications

Appendix

Table 1 Japanese Database Accessible Overseas (1996:Producers)

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

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., U.K., Germany, France, China, Singapore, Hong Kong
	INTELECT	Sales information of home appliances and durable consumer goods obtained in U.S.A., Canada, and Mexico	②	E	P/D	M	
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	
Association of Agricultural and Forestry Statistics	Agriculture, Forestry & Fisheries Statistics	Statistics Data including Agricultural Census	②	J	P/D	M/C	Korea
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
COMLINE Business Data, Inc. (COMLINE)	CDN	News on Japanese companies in nine 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	
	KED	News on Korean companies and industries	②	E	D	O	
D&B Information Services Japan K.K. (DBIS)	DunsPrint	Credit information on Japanese companies	②	E	P/D	O	Worldwide
	WorldBase	Short Form Japanese Company Information	②	E	P/D	O/M/C	Worldwide
	Japan 250,000	CD-ROM including 250,000 Japanese Companies	②	E	P/D	C	Worldwide

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
Database Promotion Center, Japan (DPC)	Database Directory	Electronic version of the 'Database Directory' compiled by MITI	③	J	P	M	
EDUCA Inc. (EDUCA)	Japanese Language Thesaurus	Directory 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/E	P/D	O/M/C	
ELECTRONIC LIBRARY Inc. (EL)	ELNET	Articles, with full-text image data, of 51 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 literature published by Japanese chemical societies	①	E	P/D	M	Europe
	NQRS	Numerical data of Nuclear Quadrupole Resonance Spectrum (NQRS)	①	E	P/D	M	
Japan Audit Bureau of Circulations (JABC)	ABC Data Online Service	Circulation data of Japanese newspapers and journals	③	J	P/D	O/M	
Japan Construction Information Center (JACIC)	Infor JACIC	Open Bid Announcements and Information for Construction Materials	②	J/E	P/D	O	Worldwide
JAPAN CENTER FOR INTERCULTURAL COMMUNICATIONS (JCIC)/Japan Information Network (JIN)	FACTS OF JAPAN	Various kinds of statistical data	②	E	P/D	O	Worldwide
Japan External Trade Organization (JETRO)	Governmental Procurement	Governmental Procurement on Official Gazette	③	J/E	P	M	Worldwide
	Import Procedure by Commodity in Japan	Description of import procedure by commodity	②	E	P	O	
	Japan Trade Directory	List of Traders in Japan	②	E	P	M	
	JETRO Publications in English	List of JETRO Publications	②	E	P	M	
	Japan Regional Investment Guide	Guide for Investment for JAPAN	②	E	P	M	

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
Japan External Trade Organization (JETRO)	Market Trends in Japan	Guide of Japanese Market	②	E	P	M	Worldwide
	Potential Imports	List of Importers	②	E	P	M	
	Trade Fairs in Japan	Information of trade fairs in Japan	②	E	P	M	
	Your Market in Japan JETRO QUEST	Macrodata of Japanese Economy	②	E	P	M	
Japan Patent Information Organization (JPIO)	Design	Bibliographic information of registered design in Japan since 1965	①	J	P/D	O	U.S.A., Germany, France,
	Japan Patent	Bibliographic information of registered design in Japan since 1965	①	J	P/D	O	U.S.A., and others
	Japio	Bibliographic information and abstracts in English of Japanese unexamined patent applications from 1976	①	E	P	M	U.S.A., France, Germany
	NPADOC	Bibliographic information on patents published by 62 countries and 4 international organizations since 1968	①	E/O	D	O	Korea, Taiwan, Germany, France, and others
	PAJ/CD-ROM	Bibliographic information and abstracts with one main drawing in English of Japanese unexamined patent application of which the applications 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
	Trademark	Bibliographic Information with some abstracts and drawings of published or public utility models in Japan since 1960	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	
M.A.I.D. Japan Co., Ltd.	Profound	Most comprehensive business intelligence	②/③	E	P/A	O	Worldwide
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 OTC drug market	②	J/E	P	M	
MARUZEN CO., LTD.	CHOICE	Bibliographic information on Japanese and Foreign books	③	E	P/D	O	Worldwide

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
Media Research Center, Inc. (MRC)	MEDIA DATA JAPAN, MAGAZINE EDITION	Advertising rates and data of consumer and business magazines	③	J	P/D	M	
	MEDIA JAPAN, NEWSPAPER EDITION	Advertising rates and data of consumer and business newspapers	③	J	P/D	M	
	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	③	J	P/D	O/M	
	NAVI (quarterly journal)	Quarterly Journal specialized software by DATAWARE TECHNOLOGIES, Equivalent in ISO 9660 and HIS (multi-operating system)	③	J	P/D	C	
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	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 composition and properties of glass	①	E	P	C	
Nichigai Associates, Inc.	NICHIGAI ASSIST BOOK	Contents information of books published after 1986 (50,000 books per year), provide outlines of novels	③	J	P/D	O/M/C	Worldwide
	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	

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
Nichigai Associates, Inc.	NICHIGAI ASSIST WHO	Biographical information of 360,000 writers in Japan, with bibliographic information of their publications	③	J	P/D	O/M/C	Worldwide
	Hon-das' Book Index	Provides references to books published since 1926 in Japan	③	J	P	O	
Nihon Keizai Shimbun, Inc. (NIKKEI)	China Economic Database	Major economic statistical data from mainland China	③	J/E	P/D	O	U.S.A., U.K., Germany,
	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	France, Switzerland, Italy,
	Consumer Radar	Originally obtained data on the attitudes and reality of consumer behavior toward financial issues	②	J	P/D	O/M/C	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	

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
Nihon Keizai Shimbun, Inc. (NIKKEI)	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	Canada, Hong Kong, Singapore, Korea
	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	
	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	
	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 whole 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	

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
Nihon Keizai Shimbun, Inc. (NIKKEI)	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	Canada, Hong Kong, Singapore, Korea
	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	
	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	
	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	

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
Nihon Keizai Shimbun, Inc. (NIKKEI)	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	Canada, Hong Kong, Singapore, Korea
	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	
	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	
	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	
	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	

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
Nomura Research Institute, Ltd. (NRI)	DataLine	Investment Environment Database Stock Database; Debt Securities Database; NRI Index Database	②	J/E	P/D	O	U.S.A., U.K., Germany, Switzerland, Belgium, France, Netherlands
	NR/E	Information of Japanese Economy, Industry, and Finance	②	E	P	O	
	FAST	Financial result and indicators of Japanese companies	②	E	P/D	C	
QUICK Corp.	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	U.K., U.S.A., Hong Kong, Switzerland, Singapore, Bahrain and others
	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	Mullet-vendor terminal sharing system for QUICK and other financial information vendors	②	J/E/O: Numeric	P/D	O	UK

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
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: Numeric	P/D	O	Hong Kong
	QUICK-21 Advance	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 exchange, money rates, commodities, investment and Nihon Keizai Shimbun News	②	J/E/O	P	O	
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	
Rural Culture Association	Gendai Nougyou'	Monthly journal 'Gendai Nougyou' title retrieval through Internet	③	J	P	O	Worldwide
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 220,000 Japanese companies	②	E	P	O/C	
	COSMOS1	Financial data of 120,000 Japanese companies, including 320,000 statements	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	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	
	JICST QUICK FILE	Database of files and bibliographic data of JICST's Collection without abstracts on keywords	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-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	U.S.A., U.K., Germany, Korea
	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	
	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	U.S.A., U.K., Europe, and others
The Japan Shipping Exchange, Inc.	Japan Maritime Information Service	Japan Flag Ships	②	E	P/D	M	Worldwide
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	
TOYO KEIZAI INC.	Business Performance Forecasts	Forecast data of business performance of 2,300 public companies and 700 over-the-counter companies	②	J/E	P	M	
	lash Report (Tanshin)	Sole and consolidated account information on 2,300 public and on 700 over-the-counter companies	②	J/E	P	M	
	Major Shareholders	Top 20 shareholders of 2,300 public and 700 over-the-counter companies	②	J/E	P	M	

Appendix

Table 2 Japanese Databases Accessible Overseas (1996:Distributors/Agents)

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

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
DENTSU INC.	ELNET	Articles, with full-text image data, from 51 Japanese major newspapers and from 140 Japanese journals including monthly economic reports	③	J	A	O	U.S.A., Hong Kong, France
G-Search Ltd.	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
	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	
	Asahi Shimbun Database	Contains the full text of 'Asahi Shimbun'	③	J	D	O	
	Asahi Shimbun Evening Edition Bulletin	Provides prompt reports from 'Asahi Shimbun Evening Edition'	③	J	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	
	Company Information by Teikoku Databank	Profiles of more than 1,030,000 companies in Japan	②	J	D	O	

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
G-Search Ltd.	Company Information by Tokyo Shoko Research	Profiles with performance information for current three years of more than 640,000 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	
	Cross-File Retrieval of National Newspapers	Cross-File retrieval system from three database. Provides articles in the last two years	③	J	D	O	
	Database of Directories	Bibliographic information and general description on directories published in Japan	②	J	D	O	
	Database of Domestic Database	Provides information on database in Japan	③	J	D	O	
	Decentralization Promotion Committee's Bulletin	Prompt reports of Decentralization Promotion Committee's discussion and announcement	③	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	
	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 630,000 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	

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
G-Search Ltd.	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	
	Hon-das' Book Index	Provides references to books published since 1926 in Japan	③	J	D	O	
	IBJ-NIKKO INFORMATION SYSTEMS' DATABASE-JAPAN ECONOMICS	Major macro-economic statistical data announced by government, administrative agencies or private organizations	②	J	D	O	
	IBJ-NIKKO INFORMATION SYSTEMS' DATABASE-JAPAN INDUSTRIES	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	
	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 by Teikoku Databank	Prompt reports of bankrupt companies	②	J	D	O	
	INFORMATION OF BANKRUPT COMPANIES BY Tokyo Shoko Research	Prompt reports of bankrupt companies	②	J	D	O	
	JAFIC	Contains abstracts and references to articles on food industry	①	J	D	O	
	JCATALOG	Provides catalog of serial publications, technical reports and conference related materials published in over 50 countries	①	J	D	O	
	JCLEARING	Provides information of research on science and technology intended or in progress	①	J	D	O	

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
G-Search Ltd.	JETRO ACE	Collection of reports and statistics from 80 overseas offices of JETRO	②	J	D	O	Worldwide
	JICST (Time Span: from 1981 to present)	Contains references of the literature on science and technology from serial publications, technical reports etc. published in over 50 countries. Includes abstracts	①	J	D	O	
	JICST-E	Provides abstracts and references to articles on science and technology, medical science in Japan, described in English	①	E	D	O	
	JICST75-80 (Time Span: from 1975 to 1980)	Contains references of the literature on science and technology from serial publications, technical reports etc. published in over 50 countries. Includes abstracts	①	J	D	O	
	JMEDICINE	Provides abstracts and references to medical articles in Japan	①	J	D	O	
	JQUICK	Contains references of the current literature on science and technology from 10,000 serial publications etc.	①	J	D	O	
	JTB Hotel Information	Directory of domestic hotels and lodges	③	J	D	O	
	JTB Travel Box Overseas Version	Provides tourist information for overseas tours	③	J	D	O	
	Kagaku Kogyo Nippo Database	Articles from 'Kagaku Kogyo Nippo' the leading newspaper for chemical industry	②	J	D	O	
	Kyodo News Agency World Yearbook	Electronic version of World Yearbook published by Kyodo News Agency	③	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	
	Library on Questionnaire to Consumers	Provides reports of Questionnaire to Consumers	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	
	LOCAL GOVERNORS & MAYOR PROFILE DATABASE	Bibliographical information of Japanese local governors and mayors	③	J	D	O	

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
G-Search Ltd.	MAINICHI ONLINE DATABASE	Collection of articles from 'MAINICHI DAILY NEWS'	③	E	D	O	Worldwide
	MAINICHI Shimbun DATABASE	Collection of articles from 'MAINICHI Shimbun'	③	J	D	O	
	Mainichi Shimbun Database Personal Use Edition	Collection of articles in the last two years from 'Mainichi Shimbun Database'	③	J	D	O	
	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	
	Market Search Reference to trade papers and magazines	Provides references to trade papers and magazines concerning to the marketing research	②	J	D	O	
	Music CD Catalog	Bibliographic and price information with critics for music CD	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	

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
G-Search Ltd.	PHARMA JAPAN	Collection of articles from 'PHARMA JAPAN' for overseas' medical and medicine business men. It includes full texts	②	E	D		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	
	Sankei Shimbun Database	Articles from 'Sankei Shimbun'	②	J	D	O	
	Sankei Shimbun Database Personal Use Edition	Collection of articles in the last two years from 'Sankei Shimbun Database'	③	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 sports 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. There are stored with image data and available by fax	③	J	D	O	
	TEIKOKU DATABANK: JAPANESE COMPANIES	Business information of 210,000 Japanese companies	②	E	D	O	
	THE DAILY YOMIURI DATABASE	Collection of article from 'THE DAILY YOMIURI' published by the Yomiuri Shimbun. It includes full texts	③	E	D	O	
	Title of Weekly and Monthly Magazine	Title information of 32 popular magazine	③	J	D	O	
	TITLE SEARCH	Title information of articles from 1,000 magazines on technology	③	J	D	O	

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
G-Search Ltd.	Video & CD Flash	Prompt reports on forthcoming video & CD	③	J	D	O	Worldwide
	VIDEO & LD CATALOG DATABASE	Collection of software of visual laser-disc.	③	J	D	O	
	Yomiuri Shimbun Database	Collection of articles from 'Yomiuri Shimbun' and 'Yomiuri Katei Shimbun'	③	J	D	O	
	Yomiuri Shimbun Database Personal Use Edition	Collection of articles in the last two years from 'Yomiuri Shimbun Database'	③	J	D	O	
Information Services International Dentsu, Ltd. (ISID)	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 semi-conductor 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	ABC News	Collection of articles from 'ABC News'	③	J	D	O	Worldwide
	AERA Database	Collection of all the articles from weekly magazine 'AERA' published by Asahi Shimbun	③	J	D	O	
	American Newspaper & Magazine's Article Information	Americans' Main Magazines & Newspapers' article information	③	E	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 Newsflash	Newsflash from 'Asahi Shimbun'	③	J	D	O	

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
NIFTY Corporation	Asia Newflash	Business information on NIES & ASEAN countries and China	②/③	J	D	O	Worldwide
	Best Ten Toys of the Week	Sales data of toys in the week	②	J	D	O	
	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'	①	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 related organizations	③	J	D	O	
	CAR SENSOR	Articles from 'CAR SENSOR' the automobile journal	③	J	D	O	
	CBS News	Collection of articles from 'CBS News'	③	J	D	O	
	CD New Score Information	Information on newly published and forth-coming CD titles	③	J	D	O	
	Ceremonial Precedents	Ceremonial manners and precedents on marriage, funeral, and ancestral worship	③	J	D	O	
	Chicago Tribune	Collection of articles from 'Chicago Tribune'	③	E	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	
	CNN News	Collection of articles from the news of 'CNN News'	③	J	D	O	
	COMPUTERWORLD NET-TODAY	Collection of articles from 'COMPUTERWORLD NET-TODAY'	①	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	

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
NIFTY Corporation	COSMOS2	Financial and descriptive data on Japanese companies from Teikoku Databank	②	J	D	O	Worldwide
	Current Index to Journal Articles	Index to current articles of newly published journals, categorized into various fields	③	J	D	O	
	Current Index to PC Journal	Summary of articles from major PC journals	③	J	D	O	
	Database of Directories	Bibliographic information and general description of directories published in Japan	③	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	
	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 Business	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	
	English Business Letter Examples	Collection of business letter examples in English	③	E	D	O	
	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	

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
NIFTY Corporation	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	Worldwide
	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	
	Flower Market Information	Price information on flowers at Tokyo Ohta Flower Market	②	J	D	O	
	Fuji-TV "Baseball News"	Online-Edition of "Baseball News" by Fuji Television	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 Oishimise Guide (Tokyo Excellent Eating Places)'	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 PC Magazine	Bibliographic information on major PC magazines	③	J	D	O	
	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	
	Home Town Information	Information on cities, towns, and villages all over Japan	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	

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
NIFTY Corporation	Industrial and Technical Information on China	Major articles related to industry and technology from Chinese domestic newspapers	①	J	D	O	Worldwide
	Industrial News	News-release from companies, governments, and related organizations	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 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 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	①	J	D	O	
	JETRO ACE	Collection of reports and other materials from overseas points of JETRO, provided with textual and numerical information	②	J	D	O	
	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 24Hours News	Realtime service of articles from KYODO News	③	J	D	O	
	Kyodo Financial and Economic Newsflash	Economic newsflash from Kyodo News Service	②	J	D	O	
	Kyodo Flash News Database	Online newsflash from 'Kyodo News Service'	③	J	D	O	
	Kyodo Newsflash	Newsflash from 'Kyodo News Service'	③	J	D	O	

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
NIFTY Corporation	Law Database	Full-text of current laws held by the General Affairs Agency	③	J	D	O	Worldwide
	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	
	Los Angeles Times	Collection of articles from 'Los Angeles Times'	③	E	D	O	
	MAINICHI DAILY NEWS	English newflash 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	
	Mainichi Shimbun Health and Medical Information	Information on health care, beauty care, and medical services	③	J	D	O	
	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 attach, 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	

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
NIFTY Corporation	MRI Seminar Lectures	Full-text of lectures at seminars held by Mitsubishi Research Institute	③	J	D	O	Worldwide
	NBC News	Collection of articles from 'NBC News'	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 Text	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	
	Nihon Kogyo Shimbun Database	Collection of articles from 'Nihon Kogyo Shimbun'	③	J	D	O	
	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	
NIFTY Corporation	Online Stock Price Newsflash	Stock price news from first and second section of Tokyo Stock Exchange (TSE)	②	J	D	O	Worldwide
	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	③	J	D	O	

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
NIFTY Corporation	PC New products Products Weekly	Description and price information on new PC products	③	J	D	O	Worldwide
	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	
	Popularity and Ability of Racing Horses	Information concerning the horses registered in the race	③	J	D	O	
	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 and 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 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	

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
NIFTY Corporation	Reports from Mitsubishi Research Institute	Forecasts for 90's of various fields based on case studies	②/③	J	D	O	Worldwide
	REUTERS Overseas News Information	Collection of the news of REUTERS from 1980	③	E	D	O	
	REUTERS PRESS	Collection of articles from the news of REUTERS	③	E	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	
	Sanwa Money Center Report	Information and analytical reports of Tokyo, London, and New York stock markets	②	J	D	O	
	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	
	SPONICHI Sport Topics	Collection of articles related to sports such as Soccer, Rugby and Golf	③	J	D	O	
	Sports-Nippon Tigers Information	Information about 'Hanshin-Tigers (Baseball-Team)' from Sports-Nippon	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	

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
NIFTY Corporation	SUPONICHI Horse Racing News	Information on horse racing and popular horses	③	J	D	O	Worldwide
	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	
	THE DAILY YOMIURI Database	Collection of articles from 'THE DAILY YOMIURI Database'	③	E	D	O	
	The Financial Times	Collection of articles from 'Financial Times'	②	E	D	O	
	The Guardian	Collection of articles from 'The Guardian'	③	E	D	O	
	The TASS Database	Collection of articles from TASS	③	E	D	O	
	The Times & The Sunday Times	Collection of articles from 'Times' & 'Sunday Times'	③	E	D	O	
	The Washington Post	Collection of articles from 'Washington Post'	③	E	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	
	TITLE SEARCH	Table of contents of industrial and technological journals issued in Japan	③	J	D	O	
	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	

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
NIFTY Corporation	Travel, Taste and Sports	Profiles and special information on travel, local tastes, and sport facilities	③	J	D	O	Worldwide
	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 fresh 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	
	UPI News	Collection of articles from the news of UPI	③	E	D	O	
	USA TODAY	Collection of articles from 'USA TODAY'	③	E	D	O	
	Video and Laser Disk Information	Domestic on-sale information on video, laser disk, and compact disc video	③	J	D	O	
	Weekly Flash of 'ECONOMIST'	Collection of articles from 'ECONOMIST' journal of the week	②	J	D	O	
	Welcome to 1200 Years of Kyoto	Information on more than 1,000 events and 600 ceremonies held in Tokyo	③	J	D	O	
	World Report	Information extracted from 'Trade-pia' World reports	③	J	D	O	
	Yomiuri Shimibun Database	Collection of articles from the 'Yomiuri Shimibun'	③	J	D	O	
	Yomiuri Shimibun Newslash	Newslash from 'Yomiuri Shimibun'	③	J	D	O	
Nihon Keizai Shimibun, 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	

Company	Database	Description	Subject	Language	Status	Medium	Main Countries
Nihon Keizai Shimbun, Inc. (NIKKEI)	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	U.S.A., U.K., Germany, France, Switzerland, Italy, Canada, Hong Kong Singapore, Korea
	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.
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., Korea

Appendix

Table 3 Japanese Database being Planned for Overseas (1996)

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

Language J:Japanese
E:English
O:Others

Vendor P:Producer
D:Distributor
A:Agent
T:Telecommunications
Center

Medium O:Online
M:Magnetic Tape
or Diskette
C:CD-ROM/CD-I
F:Telefax

Company	Database	Description	Subject	Language	Medium
COMLINE Business Data Inc. (COMLINE)	BERNAMA	News on ASEAN Companies and industries	②	E	O
Japan Association for International Chemical Information	PATENT-ALERT	Collection of Japanese patents of bio-chemical field. It includes titles and keywords	①	E	O
THE ENERGY CONSERVATION CENTER, JAPAN	Energy Conservation Database	English version of Energy Conservation Database in Japanese. Energy conservation technology data and related energy and environment data	①	J/E	O
JAPAN KEY TECHNOLOGY CENTER	SDBS	Database including spectral data of six chemical compounds	①	J	M/C
Osaka City of Foundation for Urban Technology	Osaka and Its Technology	Outstanding reports on various fields of engineering written by staff engineering officers of the city	①	E	C
TESCO Direct Co., Ltd.	Japanese Patent File Infobase	Containing Japanese patents extracts, claims and figures	①	E	M/C
	Silicon Valley U.S. Patent	Containing U.S. Patent assigned to the Silicon Valley Firms	①	E	M/C

Table 4 Address of Overseas Service Points (1996:Producers/Distributors)

Company	Contacts	Address	Telephone	Facsimile	Status
ADVANSIS, Inc. (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	+81-3-5541-8687	Headquarters
Asia Data Research, Inc. (ADR)	ADR Marketing Service Ltd.	Room 2314, Park-in-Commercial Centre, 56 Dundas Street, Yaumatei, Kowloon, HongKong	+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
Association of Agriculture and Forest Statistics	Association of Agriculture and Forestry Statistics	Meguro-Sumiya bldg. 3-9-13, Shimomeguro, Meguro-ku, Tokyo 153, Japan	+81-3-3492-2947	+81-3-3492-2545	Headquarters
AXESS INTERNATIONAL NETWORK INC. (AXESS)	AXESS INTERNATIONAL NETWORK INC. (AXESS)	Seafort Square Center Bldg., 2-3-12 Higashi Shinagawa, Shinagawa-ku, Tokyo 140, Japan	+81-3-5460-7034	+81-3-5460-7009	Headquarters
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.	Daitetsu Bldg., 4F, 1-10-12 Shiba-Daimon, 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
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

Company	Contacts	Address	Telephone	Facsimile	Status
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.	3-7-1 Kanda-Nishiki-cho, Chiyoda-ku, Tokyo 101, Japan	+81-3-5281-1101	+81-3-5281-0707	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
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

Company	Contacts	Address	Telephone	Facsimile	Status
Japan Association for International Chemical Information (JAICI)	KOREA INFORMATION SERVICES FOUNDATION	#450-1, Gayang Bldg., Gayang Dong, Gangsao-ku, Seoul, 157-200 Korea	+82-2-668-1493	+82-2-3661-1586	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	2-7-7 Hirakawa-cho, Chiyoda-ku, Tokyo 102, Japan	+81-3-3263-5041	+81-3-3238-9696	Headquarters
Japan Construction Information Center (JACIC)	Japan Construction Information Center	10-20, 7-chome, Akasaka, Minato-ku, Tokyo 107, Japan	+81-3-3505-2981	+81-3-3505-2966	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
M.A.I.D. Japan Co., Ltd.	M.A.I.D. Japan Co., Ltd.	PMC Bldg., 6F 1-23-5 Higashi-azabu, Minato-ku, Tokyo 106	+81-3--585-9885	+81-3-3585-9886	Headquarters
	M.A.I.D. Plc	The Communication Bldg., 48 Leicester Sq. London WC2H 7DB, UK	+44-171-930-6900	+41-171-930-6000	Headquarters
Marketing Intelligence Corporation (MIC)	Marketing Intelligence Corporation	1-4-1 Honcho, Higashikurume-shi, Tokyo 203, Japan	+81-424-76-5164	+81-424-76-5169	Marketing Research Division
MARUZEN CO., LTD.	MARUZEN CO., LTD.	2-3-10, Nihombashi, 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

Company	Contacts	Address	Telephone	Facsimile	Status
METRO Inc.	ACTION 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	+81-3-3490-8031	+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.2104)	+81-3-3581-3292	Headquarters
NEC Corporation (NEC)	NEC Corporation	5-7-1 Shiba, Minato-ku, Tokyo 108, Japan	+81-3-3798-9111	+81-3-3798-7844	Headquarters
New Glass Forum (NGF)	New Glass Forum	3-1-9 Shimbashi, Minato-ku, Tokyo 105, Japan	+81-3-3595-2775	+81-3-3595-0255	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, PODATA 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, Sec2. 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.	+1-212-416-2667	+1-212-416-2720	Partner
	GENOIS Wirtschaftsdatenbanken	Postfach 1102 Kasernenstrasse 67, D-4000 Dusseldorf, Germany	+49-211-887-1534	+49-211-379-330	Agent
	Nihon Keizai Shimbun America, Inc.	1325 Avenue of the Americas, Suite #2500, New York, NY 10019, U.S.A.	+1-212-261-6200	+1-212-261-6209	Branch
	Nihon Keizai Shimbun Europe, Ltd.	Bush House, North West Wing, Aldwych, London WC2B 4PJ, U.K.	+44-171-379-4994	+44-171-379-0378	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

Company	Contacts	Address	Telephone	Facsimile	Status
Nihon Keizai Shimbun, Inc. (NIKKEI)	Nihon Keizai Shimbun, Hong Kong Ltd.	Suite 1707B-10, Dah Sing Financial Centre, 108 Gloucester Road, Wanchai, Hong Kong	+852-2598-1771	+852-2845-7768	Branch
Nomura Research Institute, Ltd. (NRI)	Nomura Research Institute, Ltd.	Dai-2 Yamaman-Bldg., 6-7 Nihombashi Koami-cho, Chuo-ku, Tokyo 103, Japan	+81-3-3249-9402	+81-3-3639-0273	Headquarters
	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 1502-2, Shino 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
Rural Culture Association	Rural Culture Association	7-6-1 Akasaka, Minato-ku, Tokyo 107, Japan	+81-3-3585-1146	+81-3-3585-6466	Headquarters
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
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	FIZ-Karlsruhe	P.O. Box 2485, 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
	The Japan Information Center of Science and Technology	5-3, Yonbancho, Chiyoda-ku, Tokyo 102, Japan	+81-3-5214-8401	+81-3-5214-8400	Headquarters
The Japan Shipping Exchange, Inc.	The Japan Shipping Exchange, Inc.	Wajun Bldg., 2-22-2, Koisikawa, Bunkyo-ku, Tokyo 102 Japan	+81-3-8368-8370	+81-3-5802-8371	Headquarters
THE YOMIURI SHIMBUN	THE YOMIURI SHIMBUN	1-7-1 Ohtemachi, Chiyoda-ku, Tokyo 100-55, Japan	+81-3-3217-8217	+81-3-3217-8279	Headquarters
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 Shimbashi, Minato-ku, Tokyo 105 Japan	+81-3-3574-2268	+81-3574-2224	Headquarters
TOYO KEIZAI INC.	TOYO KEIZAI INC.	1-2-1 Nihombashi Hongoku-cho, Chuo-ku, Tokyo 103, Japan	+81-3-3246-5580	+81-3-3242-4067	Headquarters
	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 Shimbashi, Minato-ku, Tokyo 105, Japan	+81-3-3502-6471	+81-3-3593-2709	Headquarters



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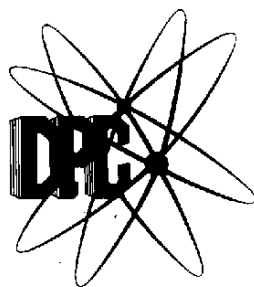
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