

Present State of Japan's Database Services

By Suzuki Hideaki

Japanese databases available abroad

Are you overly dependent on books and magazines and other printed materials when you need to find information on Japan? Japan has over 1,000 commercial databases, which are accessible inside Japan. About 30% of the databases are also available overseas, giving people outside Japan on-line access to a wealth of information. Databases are available in Japanese as well as English and other languages. The amount of information in English is gradually increasing, now accounting for one-third of all on-line information.

Japan is often criticized for its lack of information-sending. To combat this, the Japanese database industry is striving to increase the number of databases for overseas use. In 1987, when the Database Promotion Center conducted its first survey of the availability of Japanese databases overseas, there were only 28 such services, accounting for not even 10% of all Japanese databases. Today, the number has risen to 377, or 36% of all Japanese-produced databases (Figure 1).

In order that even more people abroad will use Japan's services, we will explore the current state of Japanese databases.

The history of databases

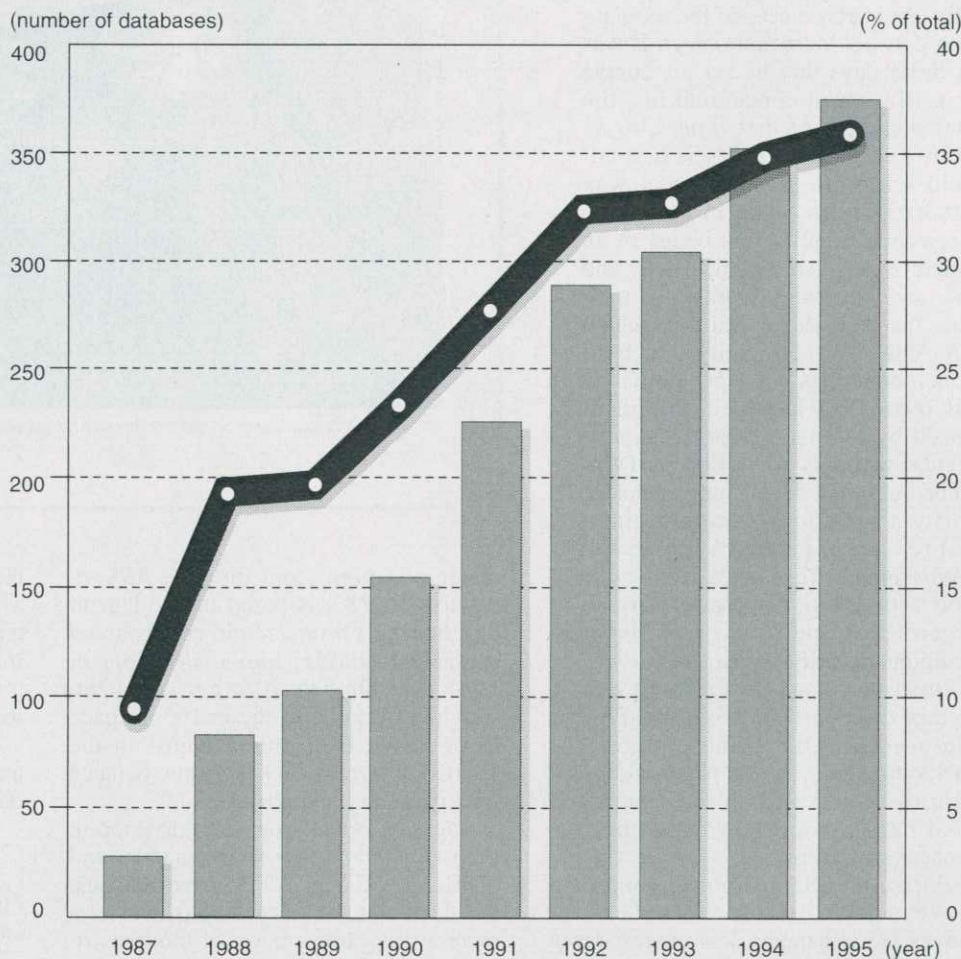
The history of Japanese commercial databases can be traced back to 1970 with the initiation of the *Nihon Keizai Shimbun's* database service, which provides data on stocks and other financial matters. Two years later, the Japan Information Center for Science and Technology came out with a database service of science and technology-related informa-

tion.

Over the past decade, the market for commercial database services has doubled and proceeds for the entire database service industry have grown to over 200 billion yen. At the same time, the number of Japanese databases has swelled by five times, now exceeding 1,000. However, since many database services from overseas are also marketed in Japan, the total number of services used in Japan is around 3,000. This figure is more than three times greater than

ten years ago. The number of users is also on the rise. Based on a count of passwords used by business database users, the number of users exceeded 330,000 in March of 1995, over ten times the number of users ten years ago (according to figures from Nikkei Business Publications, Inc.). A quarter of a century has passed since database services became available in Japan and during this time the database industry has grown faster than the overall economy.

FIGURE 1
Trends in availability of overseas-based databases



Conditions in Japan

(1) Scale of the database market

The rapidly growing database industry now seems to be at a standstill. The latest trends show that sales in 1993 were 211.5 billion yen, 1.2% lower than the previous year. 1992 sales were also 0.9% lower than the previous year, which made for shrinking sales two years running. 1992 was the first year of falling sales in the history of the database industry. For an industry that has come to see double-digit growth as a given, the effects of the current recession have been especially shocking (Figure 2).

Database services' sales of on-line services for 1993 were 164.4 billion yen, barely holding even with the year before. On the other hand, off-line services' sales fell sharply to 47.1 billion yen, just more than 5% less than the previous year. The recession hit off-line services harder than on-line services.

(2) Availability of commercial databases

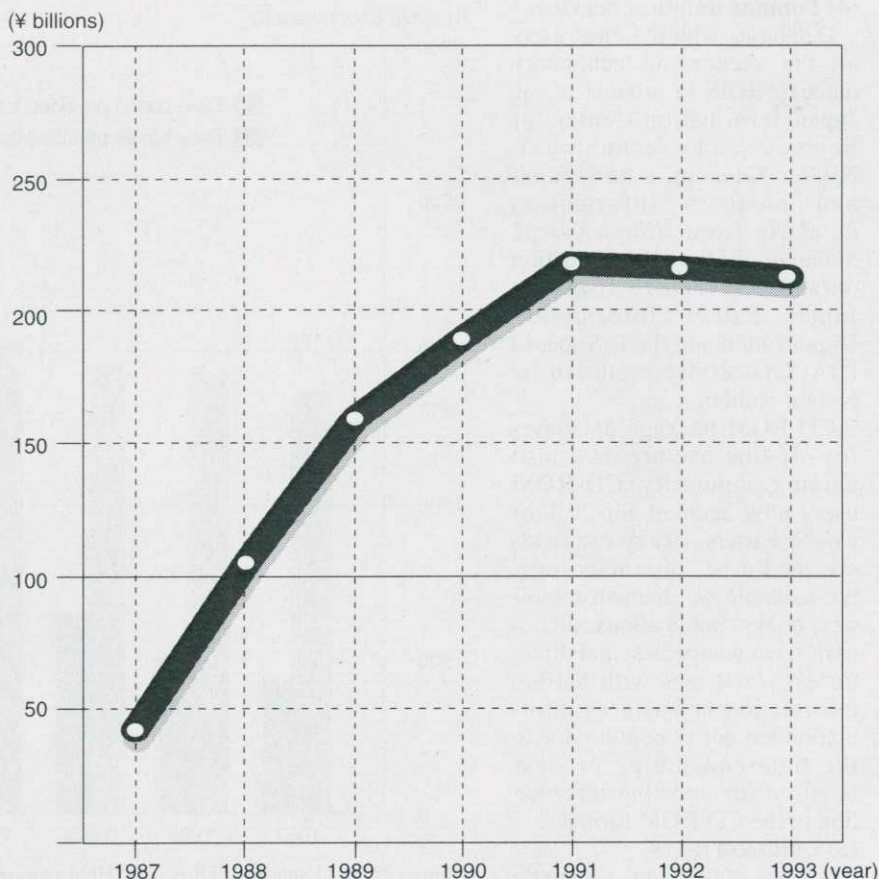
Just what kinds of database services are available? Databases available in Japan come from both Japanese and foreign services. According to the Ministry of International Trade and Industry's *Database Directory* (1994 edition, August 1995), there were 3,061 domestic and foreign database services in fiscal 1994 for a 2.7% increase over the previous year. Compared to the average year-on-year increase of 13% during the past decade, this was a great drop in the growth rate (Figure 3). Japanese databases numbered 1,048 for a 4.1% year-on-year increase and foreign databases numbered 2,013, rising only 2.0%. At least to some extent, Japanese services made a better showing than services of foreign countries. Still, Japan-based services make up no more than 34.2% of all services and their one-third share of the total market has remained fairly consistent over the past several years.

(3) Trends in database fields

Of the 3,061 databases on the market in Japan now, business-related services are most numerous, accounting for 37.9% (or 1,160 databases) of the total. The general items category accounts for

FIGURE 2

Trends in annual proceeds of database services



(Source: MITI Survey of Selected Service Industries)

30.3% (927), followed by sciences and technology with 26.8% (819), sociology and humanities with 3.1% (94) and others with 2% (61).

Business-related databases deal with economic information, financial data on corporations and data from exchange and stock markets. The general items category contains mainly newspaper articles, legal information and dictionaries. This category also covers information for individuals such as data on recreational and leisure topics, but as yet there are few databases devoted to these issues. The science and technology field includes information on medicine, chemistry, patents, electricity/electronics and energy/resources. The sociology and humanities area includes population statistics and education

issues.

In the past, business and science and technology databases made up for the bulk of database services, but now more databases containing news and newspaper articles are available. The amount of databases falling into the general items category is growing yearly.

Categorizing Japan-based and foreign-based databases according to field brings into sharp relief what kind of databases are being imported to Japan or, in other words, which databases are lacking in Japan. The overwhelming number of foreign databases fall into the science and technology field. The ratio of Japanese and foreign science and technology databases is a hefty seven to one. In some areas such as medicine, pharmacology, chemistry,

electricity/electronics, foreign-made services are dominant.

(4) Popular database services

Databases with the most users are the science and technology database JOIS (a product of the Japan Information Center for Science and Technology), Nikkei Telecom, a newspaper and business information database from *Nihon Keizai Shimbun*, the patent information database PATOLIS from the Japan Patent Information Organization and the U.S.-based DIALOG service produced by Knight-Ridder.

CD-ROM package databases for off-line use are now also gaining popularity. CD-ROM users now account for 20% of database users. Heavy-use fields are medicine, pharmacology, bio-technology, chemistry, biology, books, publications, dictionaries, encyclopedias, and directories. Databases with market information or business information are not as popular due to the time-consuming process required for updating information in the CD-ROM format.

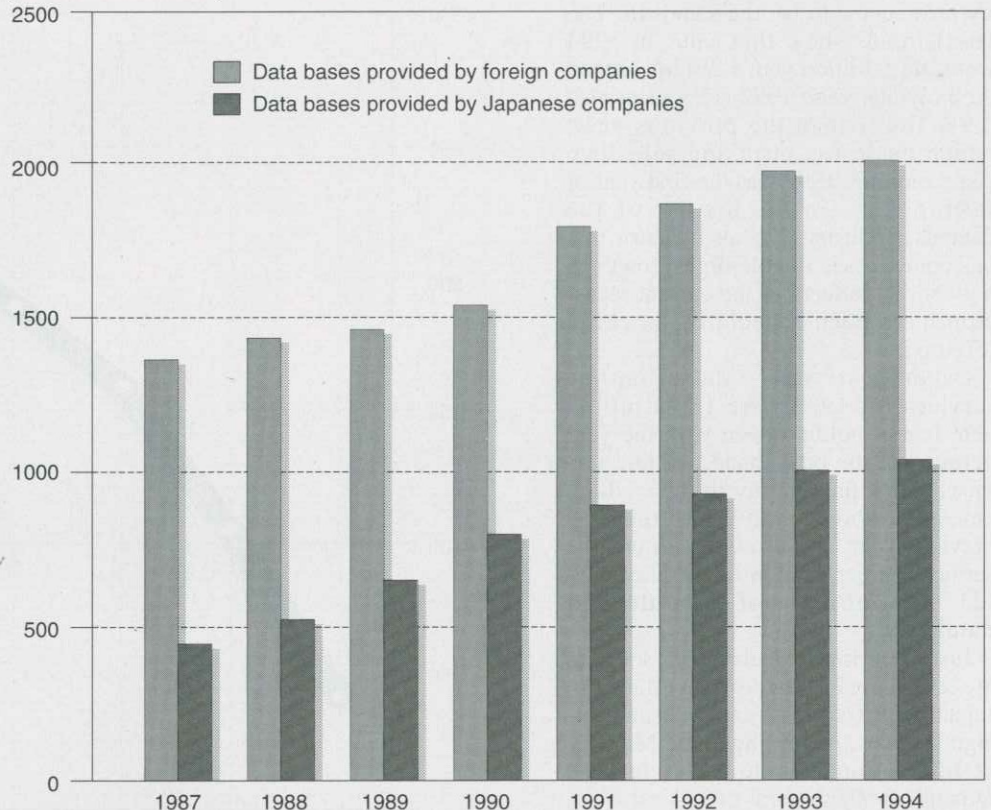
(5) Database users

Nearly 70% of all domestic users of these databases are from the finance and insurance industries. Information services that provide real-time data on the market price of stocks and bonds are essential to the daily business of financial institutions, explaining why users are so numerous in this area. The finance and insurance industry is followed by mining and manufacturing, construction and real estate and civil service. Interestingly enough, users in the wholesale and retail industries account for less than 2% of all users. Individuals make up 2.9% of all users, suggesting that databases are not yet a part of the average person's lifestyle. According to a Database Promotion Center survey, about 70% of individual users use databases for less than 30 minutes per week. The reason for this is thought to be that there are still few databases that

FIGURE 3

Trends in number of databases available in Japan

(number of databases)



(Source: MITI Data Base Directory, 1994 edition)

provide the type of information desired by individuals—services offering information on publications, shopping, ticket reservations, and leisure activities.

How are databases used by businesses? According to the *Survey of Japanese Databases Services* (User edition) conducted by the Database Promotion Center in the fall of 1994, nearly 70% of all companies use databases. Over 70% of large corporations use databases, while about half of small-to-medium-sized enterprises do.

In fiscal 1993, the average company spent 30 million yen on database services. The average for large companies was around 40 million yen while the average small-to-mid-sized company spent 3 million yen, a gap of over 10 times.

By field, databases are used in the

research, patent, survey, business and planning, and almost every other sector. There is also a trend away from relying on specialists to make searches of the databases as more users are searching by themselves for the information they need. For business users, databases are becoming a normal part of their workday and an essential tool in their daily business.

For anyone wishing to find out more about Japanese databases, including an introduction to Japanese databases that can be accessed abroad, please refer to *Databases in Japan 1995*, a handbook put out by the Database Promotion Center (\$40). Inquiries by fax to 81-3-3432-7558.

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