

## Special Issue on Service Businesses

# ATM Supervision, Operation, Maintenance Service Business

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**Abstract**

*Japan Business Operations Co., Ltd. (JBO), whose business will be an outsourcing service for the functions of operations supervision and operations management of ATM's, has been established through the joint investment of Oki Electric Industry Co., Ltd. and Oki Customer Adtech Co., Ltd. (OCA.) It will begin business in the Kanto area (greater Tokyo) and will gradually expand across Japan, eventually offering an ATM total solution, even handling an information service, centered on ATM's.*

**Business Background**

Along with the increase in the number of installed ATM's and the extension of operating hours to 24 hours a day, 365 days a year, the volume of work associated with managing the operation of ATM's has become an increasing burden on financial institutions. At the same time, financial institutions are actively moving ahead to improve the efficiency of management. In this context, their needs are increasing for outsourcing of the work of ATM operations management with the objective of reducing the cost of operating ATM's and cutting associated expenses. In this environment, Oki Electric, has decided to offer an efficient service for the work of operations supervision and operations management of ATM's, which would be directed not only to the (ATM) products of Oki Electric, but also to "multi-vendor" equipment. To do this, Oki will utilize its know-how concerning ATM operation (which it has built up over many years), the strength of its top market share in this business area (approx. 40% of the installed base), and the broad-area maintenance network of OCA, with more than 300 locations nationwide (in Japan.)

**Service Content**

This new business is based on three pillars: [1] Supervision Service, for monitoring the operating condition, remaining media (receipts, etc.), and other parameters of the ATM, [2] Operation Service, cash requirement forecasting, establishing a plan for loading cash, etc., and [3] Maintenance Service, which puts major emphasis on preventative maintenance. The overall image of this service is shown in Figure 1. <Explanation of Terms>

- Auto phone  
Installed together with the ATM, it is a telephone

set which, when taken "off the hook," automatically connects to the ATM supervision center.

Used when troubleshooting a machine breakdown and when querying about operation.

- BS company  
Short for "Business Service" company. Basically, a company formed through 100% capital investment from a bank.

Each bank has several of these. Their business function is all aspects of ATM operation, the (information or data) centralizing work, etc.

The content of each of the services is described below.

**Supervision Service**

By supervising a number of financial institutions via a common infrastructure supervision system, this service enables reduction of operating cost by holding down system investment, effectively using human resources, etc. In addition, by positioning people knowledgeable about ATM's in service centers, it is possible to accurately determine the situation and respond effectively. The result is a service that makes an important contribution to improving CS. This service is made up of four service components:

- ATM supervision service:  
It performs monitoring of ATM operating condition, remaining amounts of media, such as cash, receipts, etc.
- Trouble response / dispatch order (request) service:  
When trouble occurs, any of the following can be sent from the service center: a "remote restoration response," an order to dispatch personnel to help in recovering from the trouble, or an order to dispatch help to exchange or refill various types of media, such as cash or transaction slips.
- Phone call receiving service:  
It responds to a variety of inquiries from the auto-phone which is installed in the ATM corner.

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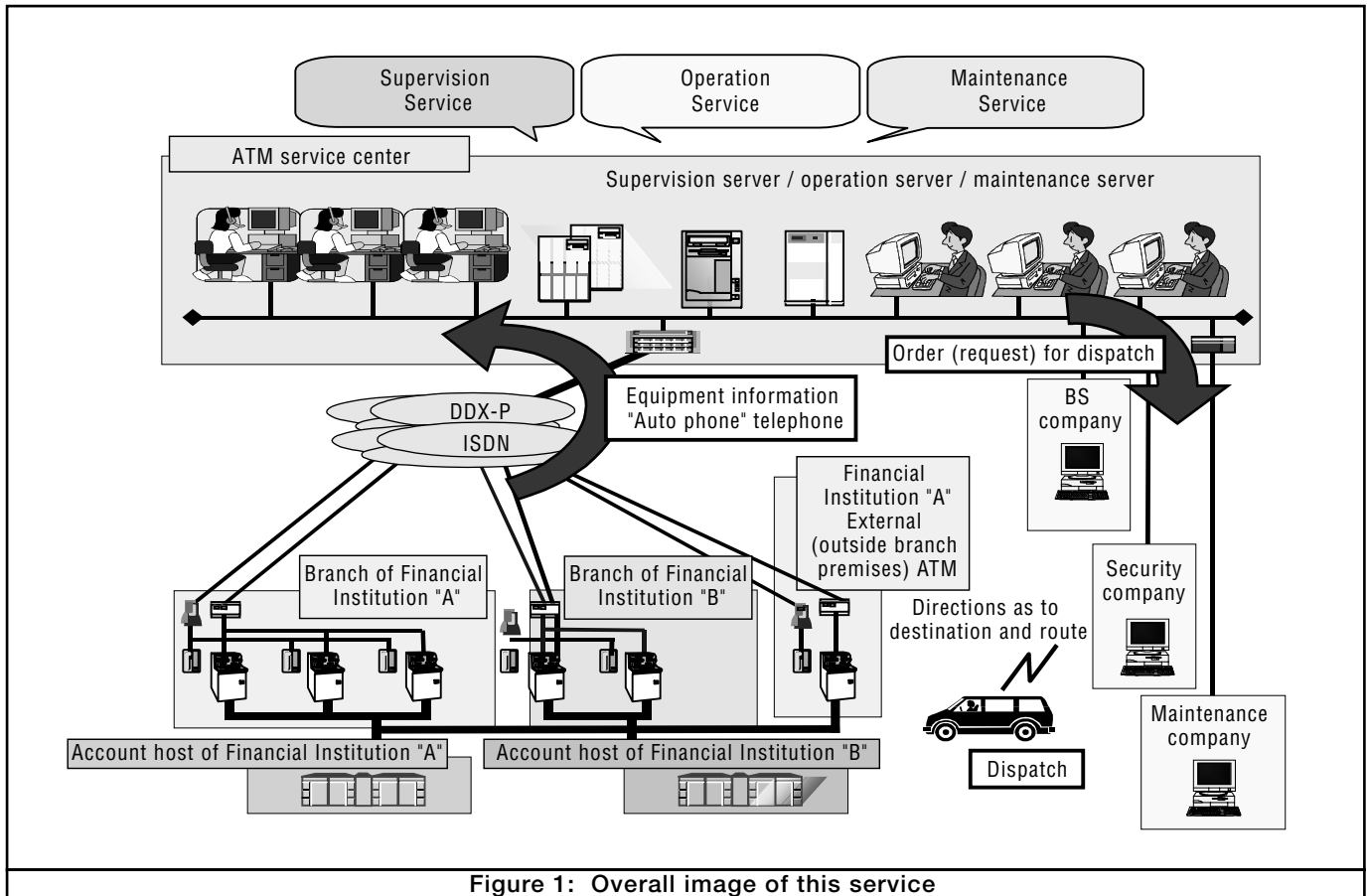


Figure 1: Overall image of this service

- **Graphic image monitoring service:**  
It monitors the situation at the ATM corner, such as the entry of suspicious persons at night, etc., by monitoring electronic images.

### Operation Service

Using one of our "core competencies," cash forecasting algorithms, this service systematizes and automates the complicated and troublesome work of cash management which in the past had basically been done by hand, relying on experience and intuition. In this way, operating costs can be cut, through reduction in cash requirements and decrease in expenses related to dispatching support units to ATM locations. The service also has the feature of offering comprehensive operating support, even including the cleanup of ATM booths.

This service is made up of six service components:

- **Cash forecasting service:**  
Gathering and analyzing data on the amount of cash used at each ATM, which varies daily, this service forecasts the optimum amount of cash to be kept on hand, avoiding overages or shortages.
- **Planning service for cash loading:**  
It establishes plans for loading cash, based on the results of the cash forecasting.

- **Automatic inspection service:**  
Based on the plan for loading cash, it creates a plan for automatic inspection (detailed checking) and automatically generates the necessary order (request.)

### <Explanation of Terms>

- **Automatic inspection**  
Automatically counts the amount of cash inside an ATM and, after a transaction, automatically performs verification (inspection) against the account.
- **Management information provision service:**  
It supports the development of plans for CS improvement/ retail strategy and ATM installation efficiency, such as ATM equipment usage rates and analysis of volume of usage
- **File delivery service:**  
By means of automatic downloading, the service delivers payment files and software programs from a service center. In the past, (payment-related) work had been done manually and placed a large and bothersome workload on local branches.
- **Cleanup service for equipment and booth:**  
It takes care of the cleanup of ATM machines and the booths in which they are installed, putting to use our know-how about the equipment maintenance.

nance program and the important external characteristics of the installation environment which result in maintaining and increasing ATM operation rate.

### Maintenance Service

This service has improved the work of maintenance. Through introduction of a remote maintenance system (maintenance server), what used to be of the “fix the problem after it occurs” type has now been improved into the “eliminate problems before they occur” type. This has resulted in increased equipment utilization and decreased maintenance cost due to greater efficiency in maintenance work. In addition, through the systemization of the positioning of mobile (support/repair) staff and work progress management, this system increases the efficiency of the work of dispatching mobile staff and, through linkage to the supervision system, it has the special feature of excellent equipment maintenance management.

This service is made up of four service components:

- **Preventative maintenance service:**  
With this service, ATM's regularly notify the maintenance server of equipment utilization data enabling the maintenance server to gather and analyze preventative maintenance data. Then, by advising the appropriate staff to take the appropriate preventative steps before there is a breakdown, the frequency of breakdowns can be reduced ahead of time.
- **Primary maintenance service:**  
To handle minor trouble such as card jams, the

function of finding the location of mobile repair personnel, through utilization of GPCTI, can be used, and if a repair person is located nearby, the procedures for dispatching him to the site can be completed. In this way efficient, speedy response is achieved.

- **Centralized trouble receiving service:**  
Linked to the ATM trouble information database of the Supervision System, this service performs supervision of equipment operation and at the same time acts as a centralized receiving point for information on equipment trouble. It compares information on a new problem to histories of past trouble and, based judgments, which take into account all factors, it deals with the problem in an efficient way.
- **Service for issuing dispatch orders (requests) to equipment maintenance companies:**  
In cases where it is necessary, based on the fault condition, an order is issued to the appropriate equipment maintenance company to dispatch help. In addition, besides the above cases, there are [1] the “ATM total service” where JBO provides even the ATM equipment itself, and [2] the “business activity centralizing service” which, acting as an agent, performs the business activities of a financial institution's business centralizing center.

The content of each of those services is described below.

### ATM Total Service

- All the previously installed ATM's of a financial institution are bought by a leasing company.
- Our company leases back the ATM's from the leasing company.

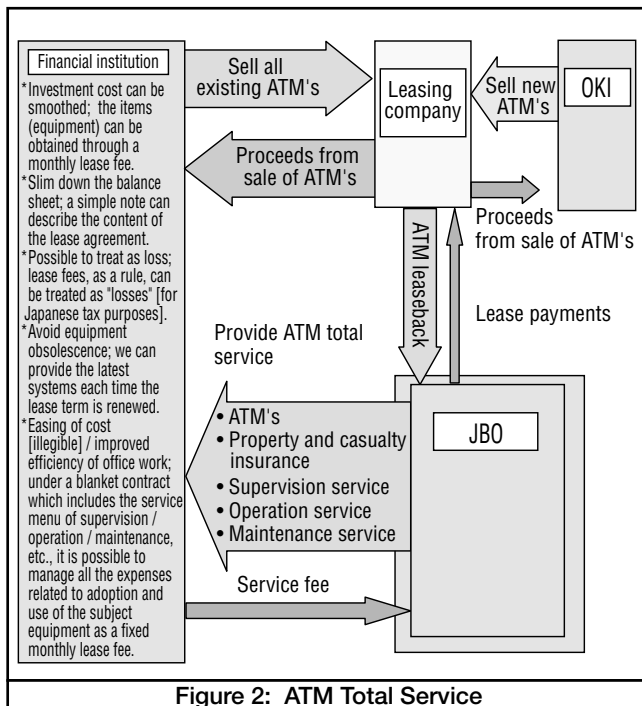


Figure 2: ATM Total Service

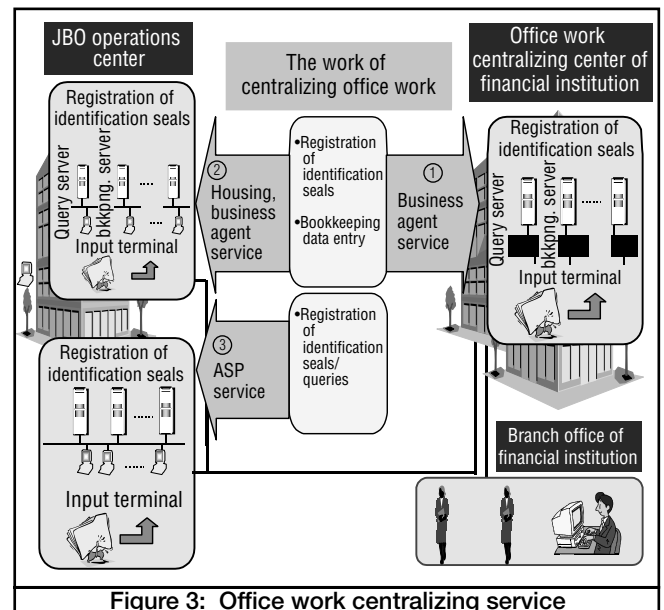
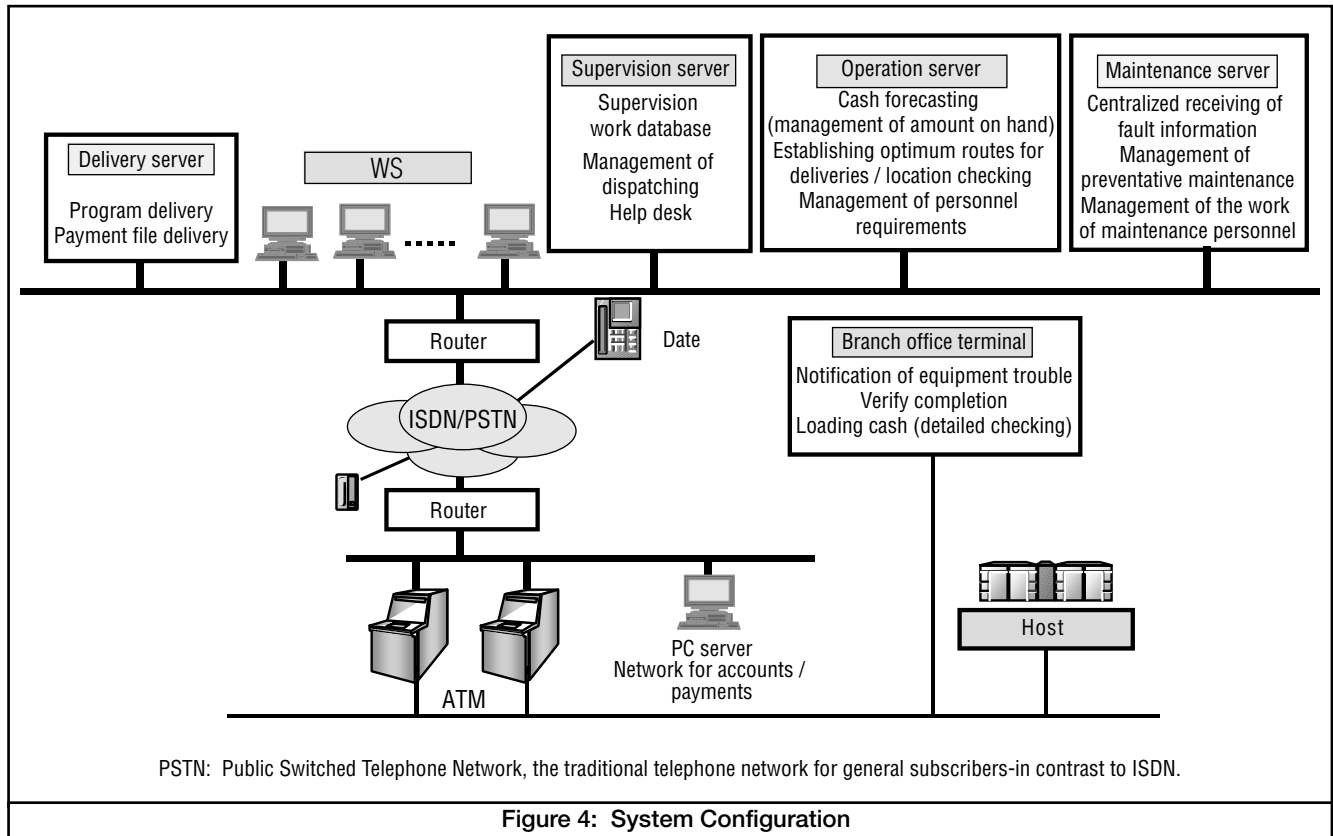


Figure 3: Office work centralizing service



- We add all the services of ATM supervision, operation, maintenance, insurance, etc. to the ATM's we have leased back and then re-lease them to the financial institutions.

The image of this business is shown in Figure 2.

### Office Work Centralizing Services

- A service whereby management and business functions are performed in an "agent" role, utilizing the existing centers and systems of financial institutions.
- A service whereby both the housing of existing systems and management and business functions are performed in an "agent" role.
- An ASP service which utilizes our company's jointly owned centers and systems.

The image of this business is shown in Figure 3.

### System Configuration

Here we will discuss the system configuration built of our three business pillars: Supervision Service, Operation Service, and Maintenance Service.

Individual servers are installed for Supervision Service, Operation Service, and Maintenance Service, so partial service provision, such as Operation Service only, can be offered. Also, because each server is connected to the same LAN, the structure enables timely information linkage. We have given consideration to holding down

the user's initial investment, so for connection to the ATM, it is possible to select either "ATM direct accommodation system" or accommodation via a host computer."

System configuration is shown in Figure 4.

### Business Scheme

Our company will take on, as a contractor (outsourcing supplier), not the above services, but also the total business package related to ATM operation, including transport of cash to the ATM's and the work of "secondary maintenance." The method of operating this contracted business will basically be along the lines of the cooperative work we are currently doing with BS companies and security companies. In addition, we will sub-contract equipment security work to a security company and secondary maintenance to the maintenance companies of each equipment vendor.

The basic business scheme is shown in Figure 5.

#### <Explanation of Terms>

- Secondary maintenance  
This refers to work which only the ATM vendor's maintenance personnel can do, such as handling equipment breakdowns, parts exchanges, equipment maintenance, etc.



Photo 1: ATM Service Center (entrance)

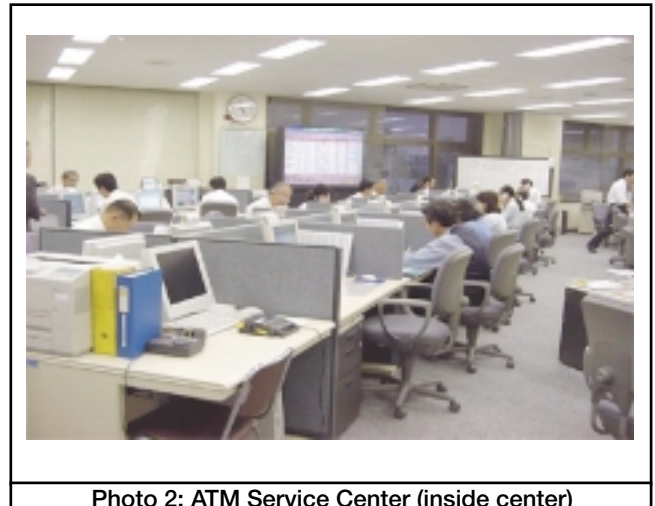


Photo 2: ATM Service Center (inside center)

## Activity

Our activity up to this time is as follows.

- April 3, 2000  
Established Japan Business Operations Co., Ltd.  
Opened an ATM service center in the Tokyo area.
- Mid-September, 2000  
Began ATM supervision service at Bank "A"
- Mid-October, 2000  
Complete transfer of ATM supervision service of Bank "A"

## Future Business Development

First of all, earnestly pursue acquisition of new clients among regional banks, which are Oki Electric's major ATM users and online terminal users and expand the number of adopters of our systems. In this way, quickly establish a business foundation. At the same time, in business year 2000 we plan to establish our second base which will be in the

## TIPS Company Outline

Company name: Japan Business Operations Co., Ltd. (JBO)  
 Location: Head office: Shibaura 4-10-12, Minato Ku, Tokyo  
 ATM Service Center: Ishijima Sokei Bldg., Koto Ku, Tokyo  
 Capital: 480 million yen (Oki Electric Industry Co., Ltd.: 60%; Oki Customer Adtech Co., Ltd.: 40%)  
 Date of establishment: Company founded: April 3, 2000  
 Business year: April 1 to March 31 of the following year

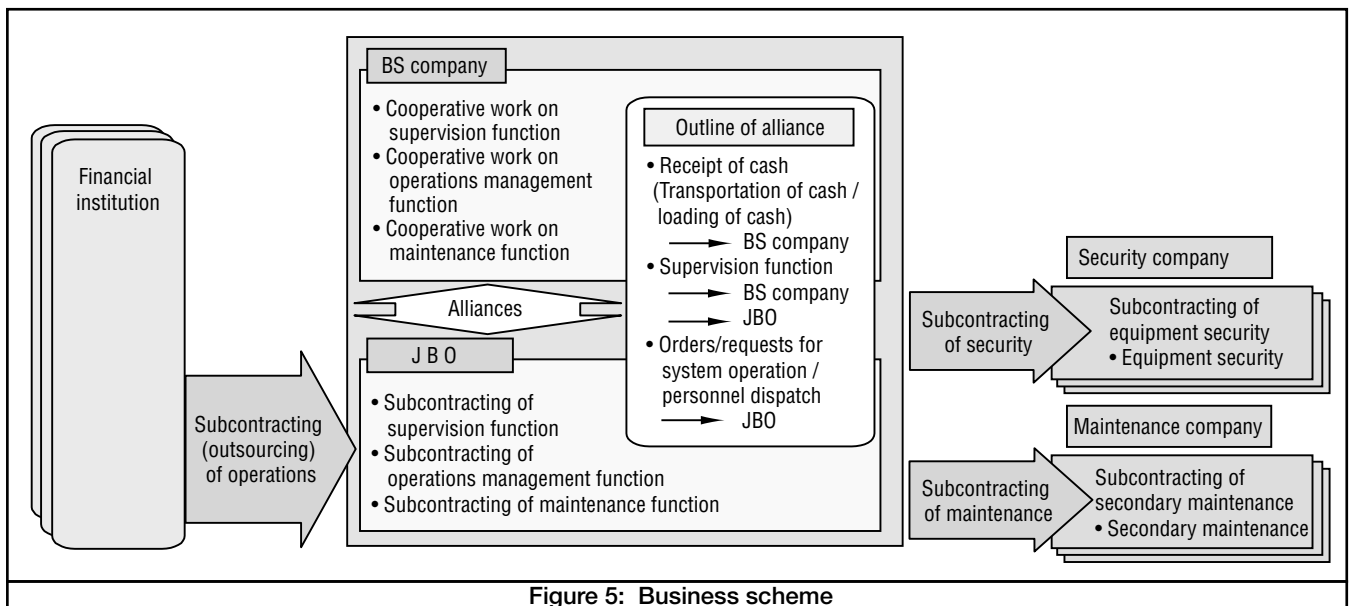


Figure 5: Business scheme

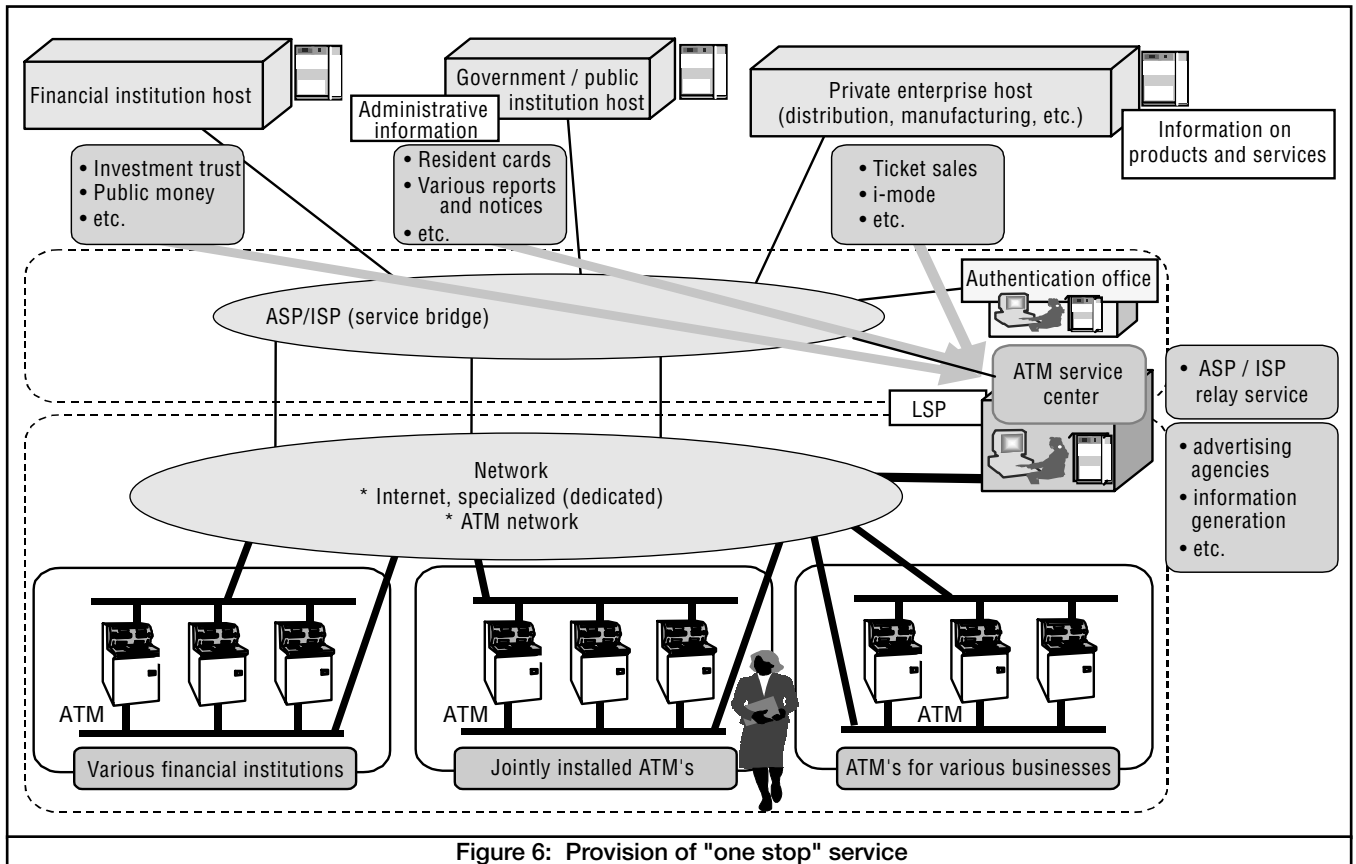


Figure 6: Provision of "one stop" service

Kyushu region and will also serve to back up our Tokyo region "ATM Service Center", and to develop services aimed at approx. 10,000 ATM's, primarily those of Oki's ATM customers in the Kyushu region. Afterward, we plan to expand our services on a nationwide scale and gain users accounting for over 60,000 ATM's which is equivalent to a 50% or greater share of the installed base of ATM's nationwide.

In addition, we are planning to provide one-stop service using ATM's linked to various types of business hosts,

ISP's, etc. (refer to Figure 6.) In this way we intend to become a total solutions company focused on ATM's.

#### <Explanation of Terms>

- LSP

Abbreviation for Local Service Provider, these organizations (from bases affiliated with JBO) provide useful information services for the benefit of customers.

The term is used to make a distinction compared to Internet Service Providers (ISP's.)