

IP Technology Changes the Contact Center Operation

— Introduction of IP Contact Center —

Market Trend

In Japan, IP telephony service, which can interconnect with existing PSTN, has been offered fully by many ISP since the second half of 2003. This service uses 050 for head telephone number. This IP telephony service can provide free-call within the ISP group, and drastic reduction of international and long-distance call charges.

The deployment rate of xDSL (Digital Subscribers Line) and FTTH (Fiber To The Home) are



growing rapidly in recent years, so it becomes possible to use real-time streaming service such as moving picture, which requires broadband service (see Fig. 1). Furthermore, broadband service is available anytime and anywhere, because broadband is also offered in

the mobile field.

Thus, IP Contact Center which can provide wide range of communication options, accompanying the spread of IP telephony services and broadband services, is likely to take off from the second half

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Mr. Abe is a member of the Institute of Electronics.



of 2004.

Some benefits of IP Contact Center, includes lower communication cost, the expansion of the broadband service by integrating image and data, and the possibility of the responding to a call response anywhere.

Explanatory Note

What's the feature of IP contact center?

(1) The Feature of IP Contact Center

The platform of an IP Contact Center is IP. The typical example of an IP Contact Center system configuration is as shown in Fig. 2. There are three

IP keywords: IP conversion of internal line, IP conversion of external line, and response to multimedia by IP. Each of these is explained below.

(2) IP Conversion of Internal Line

At first, as the result of IP conversion of internal line, agents can apply hot desking, and it is also possible to configure a flexible contact center. Although traditional PBX and telephone were conventionally connected using the telephone cable, through the IP network, complicated wiring becomes easy, and moves, adds and the change of telephone also becomes easy. The benefit is not only for the center site, but also for remote sites. Through IP, remote agents can be connected as if

they are still at the central site. Using this configuration, the problem of insufficient agent resource due to location is solved. Although the final step of remote site is the realization of 'home agent' who works at home, it would be possible if the problem of personal information protection is resolved. Moreover, on the system configuration, because of the centralization of all hardware

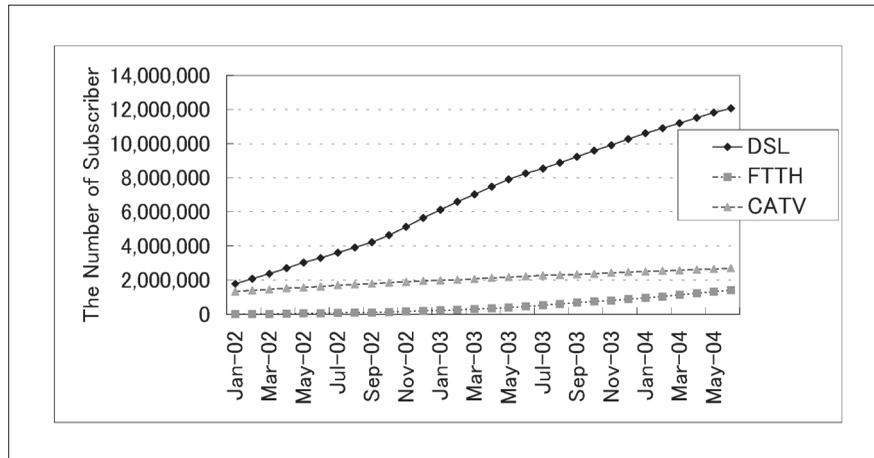


Fig. 1 The number of subscriber to Broadband Internet (MPHPT Survey June, 2004).

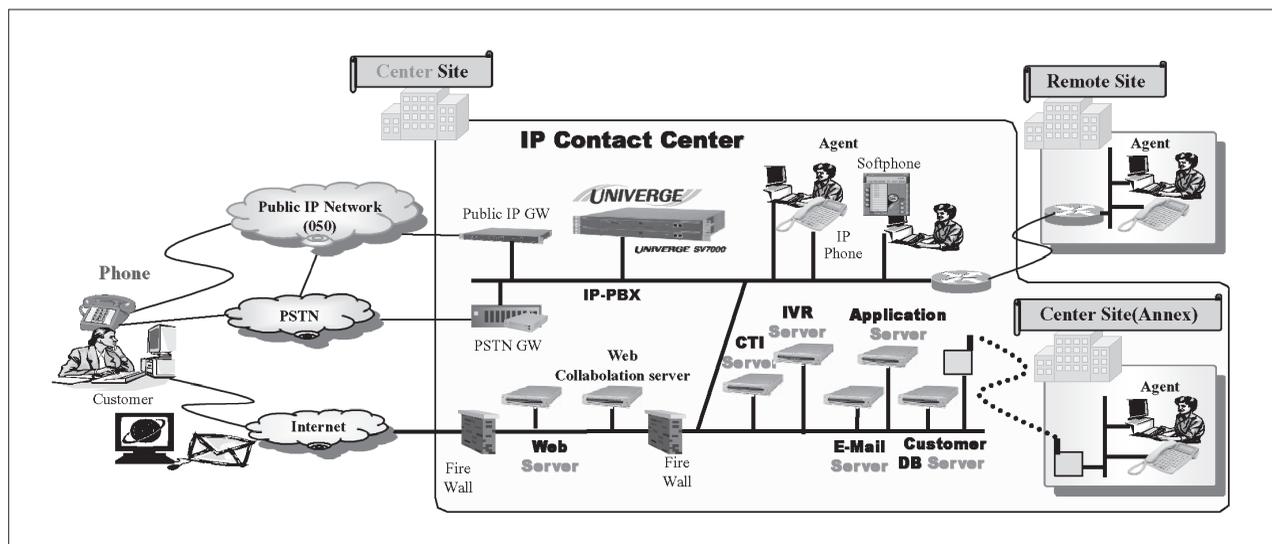


Fig. 2 Configuration of IP Contact Center System.

(server), comprehensive management is possible and cutting down of running/management cost is attainable.

(3) IP Conversion of External Line

Next, IP conversion of external line is available by connection with Public IP Telephony Service Networks (050). Public IP telephony network service is now launched for individual user, but it will be sequentially released for business user. Public IP telephony network and the contact center are connected through the media gateway to Public IP network (SIP). By connecting with public IP telephony network, it is possible to reduce the telecommunication cost such as outbound call or toll-free service.

(4) Response to Multimedia by IP

When the public IP network became broadband, changes appeared in the physical presence of the agent in a contact center and also at the service of a contact center. Previously where only voice through telephone was possible, now, by moving to multimedia operation, various services such as answer/guidance through e-mail, operationally explanation by collaboration of web screen, position guidance with a map and so on, can be provided. A keyword called 'real-time communication' is appearing, and a more remarkable change is the web collaboration tool which is based on video and data-sharing. With the availability of these multimedia services, the response power of a contact center is strengthened and CS (Customer Satisfaction) is improved.

(5) Benefits of Introducing the IP Contact Center

Next, is the summary of the benefits of introducing the IP Contact Center.

As shown in Fig. 2, the IP Contact Center allows customers to contact the company through various media by integrating voice, data and video on broadband. Distributed Contact Centers and Home Agents can also be supported through the use of broadband. This enables the company to deploy suitable specialist to answer specific enquiries anywhere.

The following effects are expectable with such an IP contact center.

- The more efficient the contact center becomes, the higher the customer satisfaction grows.
- For agents, it is possible to respond in detail be-

cause they can look at the same screen as the customer through the Web screen's synchronous function.

- As a result of integration, IT systems such as CRM (Customer Relationship Management) or ERP (Enterprise Resource Planning) through CTI (Computer Telephony Integration), the quality and the speed of response is improved, hence, the increase in efficiency of business and improvement in customer satisfaction are expected.
- Through the use of broadband, services such as face to face communication can be offered to the customer.
- Home agent is possible, and customer satisfaction can be improved by keeping highly skilled agent's turnover rate low (offer of a free location).
- Total cost reduction by VoIP (Voice over IP).
- By connecting with public IP telephony network (050) and converting internal line to IP, it is possible to reduce the monthly telecommunication cost. And also the customer can reduce the telecommunication cost.
- The costs of adds, moves and change, due to changes in office layout can be reduced.
- Through constant broadband connection, it can be possible to lower the cost of operation because of distributed contact center.

The Products of NEC

UNIVERGE solution can be provided for meeting the requirements of these services. NEC will provide Basic Package which provides part of the core system in the IP Contact center, as well as the necessary options. The package is as shown below.

(1) Basic

NEC provides Basic package, which is an essential part of the configuration of the contact center as part of the UNIVERGE product family.

Firstly, IP telephony uses SV7000 and Dterm Series i and includes the exclusive ACD software as standard. The NavigatorMIS is used as the management information system to configure IP contact center platform. The contact center of 50 seats can be built quickly by using this package. Operational situation of the IP Contact Center can be monitored through statistics or real-time display.

IP Telephony Server, UNIVERGE SV7000
Telephony server based on IP network. It distributes calls to appropriate agent through the ACD function.

Contact Center Statistics, NavigatorMIS
Provides real time operation status, and various figure about agent.

(2) Option

IP contact center Basic package provides IP telephony, ACD distribution and MIS functions.

It is possible to perform the attendance work and dispatch work of calls, and to provide full statistics for analysis with the IP Contact Center Basic package. However, to configure more powerful IP Contact Center, it needs products to perform with higher functions. NEC plans to release CTI, IVR (Interactive Voice Response), web collaboration, CRM application, and security to support for these. The below is introduction of the options that are already released in Japan (Under considering the detail in other countries.)

CTI, Genesys
Provides various CTI functions such as customer information display at the same time with inbound-call.

IVR, Voice Operator HYPERVOICE-Light
Supports work with IVR that makes various communications.

Web Collaboration, Communication Door (Contact Center solution)
Implements closer communication with synchronized images.

CRM Application, Genesys Contact Navigator
Makes customer corresponds more efficiently by managing corresponds history and customer information.

Security, SmartOn SecureVisor, Web Contents Protector, LanScopeCat3
Provides total security against leakage of information.

The solutions which have been already released are as shown below.

(3) Other Solutions

QueWorX (Only for USA market)
QueWorX applications include Automated Attendant, Callback (Immediate, Scheduled and Internet), Queue Depth Announcement, Estimated Time to Answer, Screen Pop, Advanced Routing, Customized Announcements, and Multilingual Announcements. QueWorX integrates with CallCenter WorX.

Q- Master
Q-Master is a fully-featured multimedia contact center solution offered at a price point targeted to the small and mid-sized business. Q-Master is fully modular in design, allowing contact center managers to select the components they need to best meet their operational and budgetary objectives.

Implementation Example

For reference, below is an example of an application of the system, which enabled integration with the telephone support reservation system through the web, using the UNIVERGE SV7000 of NEC and the CTI middleware of Genesys.

Through this system, and a personal computer user's customers, NEC could respond more appropriately and promptly, and could respond to customer's demand for new goods or new services more quickly and accurately, contributing to the improvement in service quality.

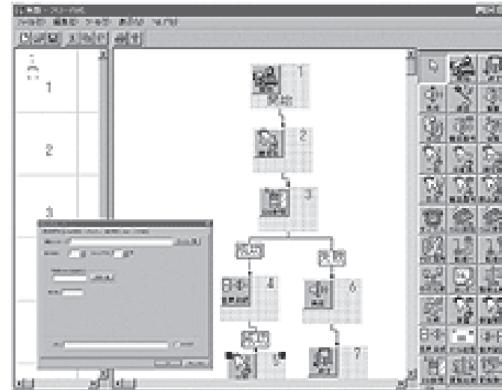
Conclusion

In addition, a UNIVERGE partner program will be developed so that products of partner companies, from now on, can be lined up and supported as a UNIVERGE product. Although there is also a case which cannot respond only with these products in the actual various needs to IP contact centers, NEC expands the area which can be adapted by performing the addition of an option product and expansion of a UNIVERGE partner program response product, and correspond by the total solution.



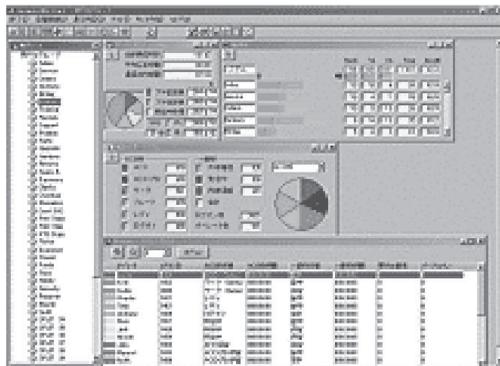
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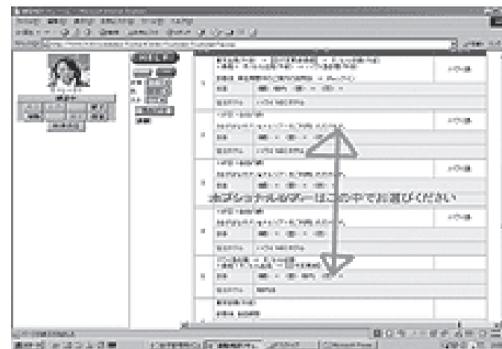
IVR:
**Voice Operator
HYPERVOICE-Light**

supports work with IVR that makes various communications.



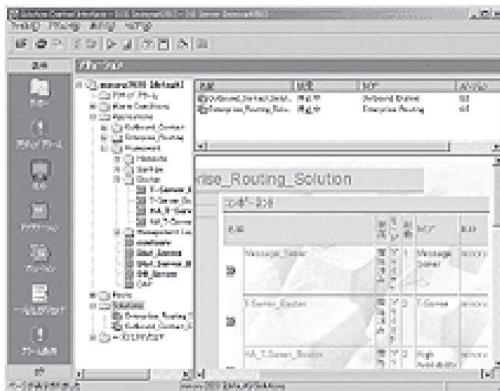
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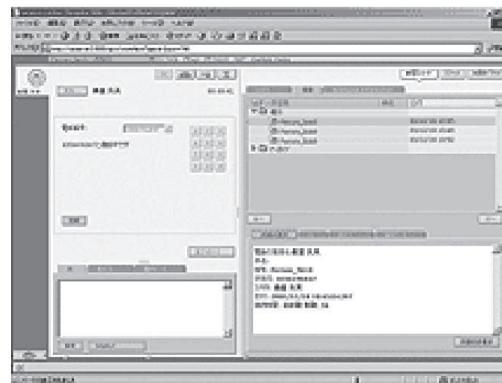
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**Communication Door
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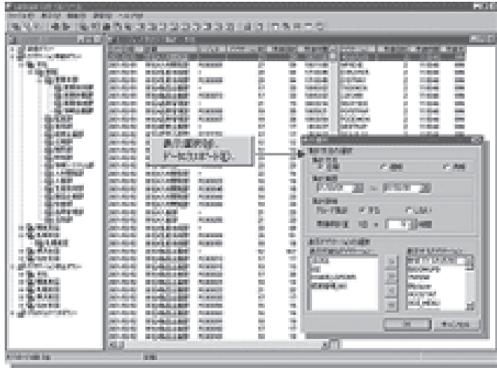
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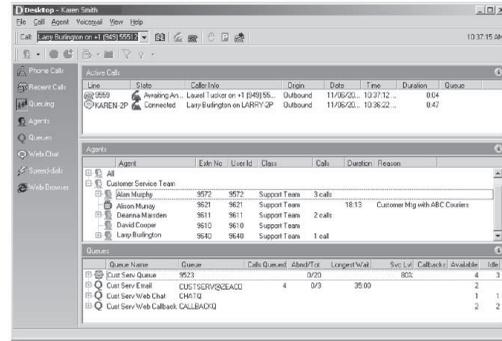


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