# Tablet Concierge
# - An Ultimate Customer Service Solution -

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## Abstract

Smart devices are rapidly disseminating in society and as essential tools of our every day lives are increasingly becoming capable of changing our life styles. Due to their innovative user interfaces, they also have the momentum to effectively change business styles while appealing to the business usage market.

NEC System Technologies, Ltd. joined this market trend from its early stages and it has been conducting R&D to apply our products and services in improving the performance of smart devices. This paper introduces details of how we are continuing to promote these activities.

## Keywords

## 1. Introduction

The iPad tablet device was released by Apple Inc. to the Japanese market in May 2010 and its innovative operability has attracted users and aroused widespread interest. Since its market release, iPad has achieved favorable sales results while presenting severe competition to the Android devices. The iPad has also been prominent in changing our life styles.

In focusing on the business domain, the tablet devices are expected to provide significant solutions for customer service and sales activities. They are providing new experiences that customers have not experienced with the conventional PC. NEC System Technologies, Ltd. launched a business concept planning project in August, 2011 in order to explore the future impact of the tablet device.

Since then, the business concept of our plan has been enhanced by reflecting on the feedback collected from the actual sales fields in achieving an ideal concept model for an effective customer service solution. After receiving favorable reports from customers, we have started to prepare the development framework for our systems development engineers in order to enhance their development environment. We have been able thereby to steadily prepare our sales and manufacturing systems to cope with the smart device business that is showing a rapid and significant spread in society.

Section 2 describes our activities that are dedicated to establishing our business concept. How we have improved our business strategy for customer services is introduced in section 3. In section 4, an outline of our "Tablet Solutions Implementation Framework" is explained.

## 2. Activities Focused on Establishing a Business Concept

When iPad was released to the market, people were instinctively aware of some of the potentialities of a tablet device. However, no one knew how it would provide us with "user experience" or how it would appeal to customers in the market. At first they were not aware of the significant implications of such an innovative device.

### 2.1 "It is not Helpful to Ask Customers about Things that They Haven't Experienced."

When creating an innovative idea that has not existed in the market hitherto, it is not helpful to conduct market research or to ask for customer opinions. Henry Ford, the founder of the Ford Motor Company, dealt with this issue in a phrase. He said "If I would ask my customers what they want, I am quite sure they would say "a horse that can run fast." An innovative idea is always created by a "professional creator." He constructs a hypothesis first, and then the hypothesis is enhanced by a "professional actually in the field."

## 2.2 Visualizing the Model of "User Experience" is Essential before Conducting Any Market Research

One of the features of a tablet device is its superior presentation appeal. The initial approach taken for this project was to focus on product usage situations so that superior presentation appeal could be optimally enhanced. The first situation to be chosen was a home appliance retail store. The author has had experience as a part-time worker with a home appliance retailer for three years during undergraduate days, in which he gained actual field experience as a "semi-professional salesman." In order for a salesman to enhance the product awareness of a customer, what sort of "user experience (the experience that a consumer feels when purchasing a product)" should the salesman provide for the customer? Based on this question, a hypothesis was constructed and a simple concept model was created ( **Photo 1** ). Note that people are only able to explain their impressions based on their own experiences. Therefore, to be able to effectively visualize "user experience" is an important function.

Most of NEC's products so far had been manufactured using seeded ideas, such as "We possess such and such a technology, so we will manufacture a product that will use that technology." However, a product manufactured using such a concept does not always meet the potential needs of customers. Therefore, the concept and plan were examined by conducting in-depth hearing surveys in order to see if they would meet the needs of customers. This meant that the plan was examined by reflecting customer opinions and "real marketing" cycles were repeated in order to brush up the applied strategy.

In the following section, customers' opinions that were acquired during the process of the plan enhancement are introduced.



Photo 1   Concept model demonstration of face-to-face customer service.

## 3. Brushing Up the Conceptual Model for Customer Service Solutions

### 3.1 Evaluation of Acceptability as a Face–to–Face Customer Service Model

This is what everyone has experienced during shopping in a home appliance store. Customer service skills vary depending on the ability of the individual salesperson. Customers cannot always expect to receive satisfactory answers from sales staff. In the home appliance retailing industry, the quality of customer service directly reflects the amount of product sales. Our new product "Tablet Concierge" is a tablet device customer service solution that is intended to support salesmen in increasing their sales.

This means that the tablet device allows a salesman with little experience to provide a better customer service when using a tablet device to display product information with the help of photographs and video. Even for an experienced salesman it is sometimes hard to catch up with the latest product information of the market due to the quick turnover in new product models. A tablet device is able to give support for them in acquiring the latest product information.

This trend will result in reducing any inconsistencies in the customer service quality that might depend on the individual ability of the salesperson and ultimately more customer purchasing motivation will result and higher customer service satisfaction will be achieved.

Moreover, sales activity using a tablet device will allow customers to acquire more helpful information easily, such as comparing products, confirming the opinions of other users and checking details of product functions, etc. This will lead to a heightened purchasing motivation ( **Photo 2** ).

With a tablet device, a variety of information such as product details that cannot be provided by a paper catalog can be



Photo 2   Screens showing product information (Left) and a product comparison chart (Right).

Photo 3   Face-to-face customer service provided by a salesperson at a home appliance retail shop.



Fig. 1   Vertical linkage model achieved by "Tablet Concierge."



Fig. 2   Scenario in which "Tablet Concierge" is employed for customer services.

displayed by using video, etc. Moreover, by linking with backbone systems or commissioned systems provided by service companies it becomes possible to display continually changing information in real time on a tablet device.

Let us suggest the situation whereby you are a newly married couple and a shop salesperson assists you in buying the various home appliances necessary for your new house ( **Photo 3** ). It must be troublesome if you have to pay for each home appliance at different cash register counters. Or sometimes your salesperson has to leave you in order to check the inventory. Your ongoing conversation is interrupted and you have to wait until he or she returns in order to resume your conversation. "Tablet Concierge" will sort out these issues. One of its most advantageous features becomes apparent in such a situation. If the salesperson is able to check inventories without leaving you and can instead show the inventory data directly to customers, superior customer services will be much more readily available. "Tablet Concierge" is not a device to be used simply as an electronic catalog. It is capable of being connected to backbone and Web systems, so that it is able to display inventory and product performance data etc. that is relayed from other users. The best thing is that a salesperson is able to share these experiences with customers. This is something that conventional PCs cannot offer us and a significant innovation in customer service is thereby offered.

With a simple operability that anyone can use, this is a UI (User Interface) that meets human adaptability and provides a one-stop service that enables users to perform various tasks smoothly, such as business presentation and routine desk work, etc. by using a single device. Such advantages create abundant value both in your work and in your everyday life. The vertical linkage with backbone business systems is NEC's strength ( **Fig. 1** ). "Tablet Concierge" can be used not just as a simple business device but also as a total SI (System Integration) business device.

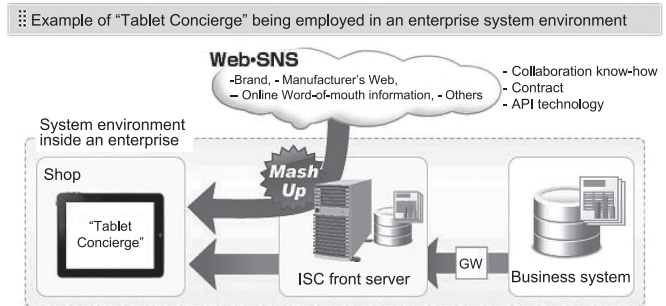"Tablet Concierge" is not a device that merely mounts a
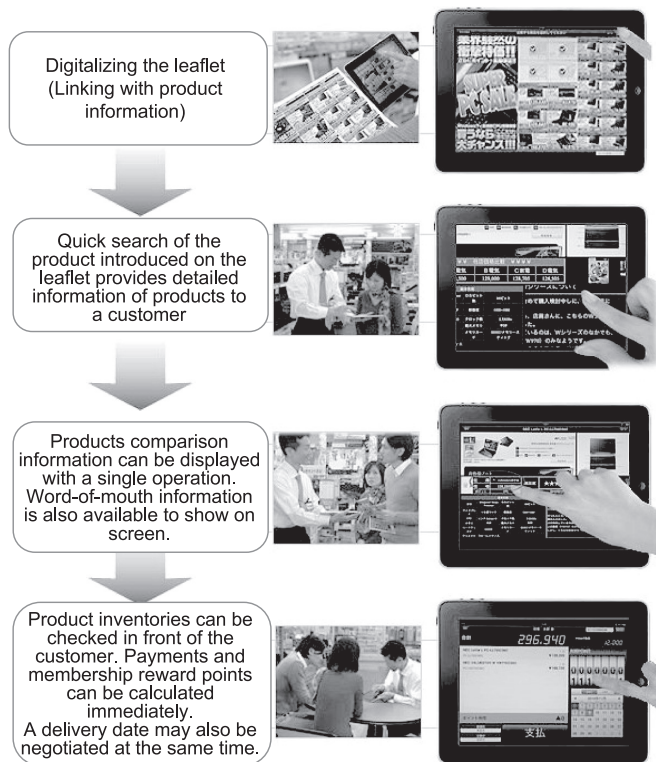
bunch of advanced technologies and various patents. It is a device that was developed by gathering the needs of customers that can therefore easily appeal to customer needs.

The usage scenario of "Tablet Concierge" described in this paper is the case for which its functions were upgraded by reflecting the views of sales staff at leading home appliance retail shops ( **Fig. 2** ).

Table    "Tablet Concierge" concept model supported by a wide range of industries.

| Type of industry | Usage purpose | | Customer opinions |
|---|---|---|---|
| Home appliance retailers (Japan) | Face-to-face customer service support | Inside stores (Face-to-face customer service) | "Tablet Concierge" is available to provide customer information from a product catalog, inventory data, delivery schedules, product specifications, etc. so that customer services can be provided without keeping them waiting. |
| Home appliance retailers (Overseas) | Face-to-face customer service support | | Japanese-style customer services are recently receiving favorable appraisals from overseas countries (Europe and U.S.). Vendor companies in these countries appreciate the introduction of our "Tablet Concierge." Availability of the "Tablet Concierge" for shops in these countries is expected in the near future. |
| Jewelry shop | Face-to-face customer service support | | Besides providing a visual explanation of products, even more sophisticated customer services  will be expected by referring to individual customer data. The best solution is to be able to perform all operations via the "Tablet Concierge" that are usually done on a PC. |
| Car dealers | Face-to-face customer service support | | Various tasks related to shop forecourt sales such as referring information, commercial tasks (quotation, maintenance, insurance, etc) can be operated and completed via a single device. |
| Cosmetic shops | Face-to-face customer service support | | By optimally using features of the tablet device; superior ability of representation, interactivity, etc., finely tuned shop-front consultation for skin condition diagnosis is expected to be provided for customers. |
| Department stores | Face-to-face customer service support | | Sales that fuse virtual products (product images) and real products as displayed in the shops will improve the customer satisfaction level. Such a sales approach may be introduced to especially shops that specialize in apparel. |
| Supermarkets | Face-to-face customer service support | | It may facilitate the reservation of products procedures (seasonal gifts, etc.) at shop counters. "One To One" customer service can also be carried out by referring to the dispatch records of repeat customers. |
| Convenience stores | Sales support | Sales support (Outside offices) | It is useful as a support tool for supervising franchise shops: proposing new products, shop management consultation, staff education, etc. |
| Banks | - Face-to-face customer service support -Sales (External Affairs) | | It can be expected to display a variety of financial products and simulation charts quickly at the shop counter. It also allows business meetings to be held at clients' offices without bringing a pile of data sheets. |
| Food manufacturers | Sales support | | It may help to appeal sales products to customers of supermarkets by showing abundant visual data. It could be effective especially in introducing case studies of shop promotion sales. |

The series of exercises that we have conducted so far has resulted in sales via a leading home appliance retailer. We have received orders via a customer service support system using a tablet device and have thereby achieved cutover for the "Tablet Concierge" [*1] .

### 3.2 Dissemination to the Cross–industry Market

In the early stages of this project, home appliance retailers were chosen as the market sales target of "Tablet Concierge." However, while introducing the product concept of "Tablet Concierge" to our clients in various industries, we found that it could be usefully employed in almost every situation where people need to contact each other, such as at the service counters of department stores and supermarkets, etc.

This means that "Tablet Concierge" can be a Cross Industry model that functions effectively beyond the confines of different industries and work styles.

Table is a list of customer views.
**(1) Operability**
● No anxiety regarding the touch operation method because it is already familiar to users as a smartphone operation.
● Communication operation is easier than for that of PCs.
**(2) Usage purposes**
● Suitable for shop floor staff to complement required information.
● Useful not only for shop floor staff but also for sales staff.
● Suitable for providing better follow-up services.
**(3) Linkage with backbone business operations**
● Inventory data can be checked while consulting a customer about the product, so that smooth business negotiations may be expected.
● Linkage with the POS system enables a quick settlement so that customers do not need to wait for the floor sales staff to come and go between the shop floor and the back office.

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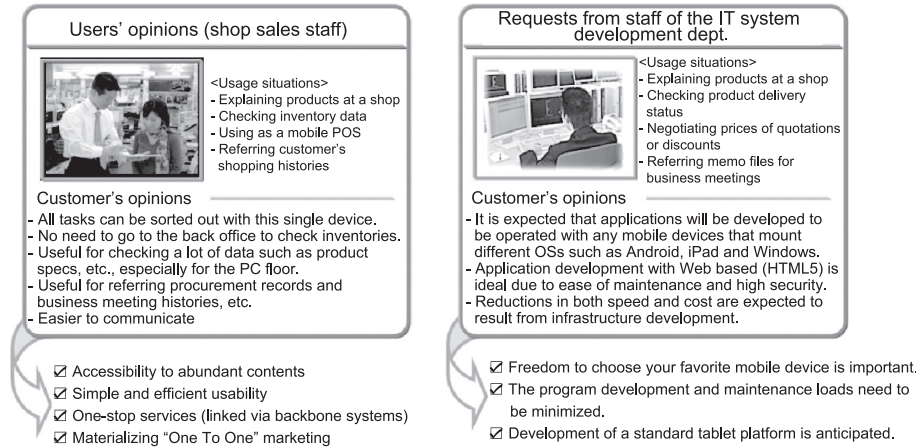*1 Photos and screen images introduced in this paper have been prepared from the different case studies.

Fig. 3   Advantages found in the fields and issues that the systems department staff may encounter.

As described above, the hypothesis of the concept model was constructed and examined while considering the implications of various shop floor opinions. At the same time opinions from the systems development department were also collected. These opinions were quite different from the ones collected from the shop floor and they revealed various unique issues that the engineers of the systems development department had discovered ( **Fig. 3** ).

**Issues of the development departments**

- Different OSs such as iOS, Android and Windows are employed by different tablet devices. It is difficult for the system department staff to aggregate the different OSs. Therefore, different applications need to be developed for the different mobile devices, depending on their OSs. This means that it is necessary to update and maintain all of these applications in order to effectively support the different device models life cycles, which is an almost impossible task.
- It would be difficult for an enterprise to employ system development staff for each OS.
- New models of mobile devices are marketed one after another. However, it imposes a heavy burden on the system department staff to release new applications to go with these new models, because verifications have to be done for the various peripherals (printers, bar-code scanners, etc.) that have to be connected to these newly marketed mobile devices.

- Moreover, unlike a desk top PC, a mobile device can be carried around outside of the office, so that information leakage may be expected due to loss or theft.

In order to solve issues that the system development department may encounter we have prepared a "Tablet Solution Implementation Framework." This solution has improved development conditions in this department. An outline of the "Tablet Solution Implementation Framework" is provided in section 4.

## 4. Outline of the Tablet Solution Implementation Framework

### 4.1 Framework Proven by the Needs of Various Fields

The framework was configured not just by reflecting the opinions of the development section staff. It is a development platform that reflects opinions collected from actual field situations. The needs of the systems department staff are sometimes different from those that the actual users are seeking. However, this implementation framework has been developed to satisfy the needs of both groups ( **Fig. 4** ).

### 4.2 Four Unique Points of the Framework

The "Tablet Solution Implementation Framework" is
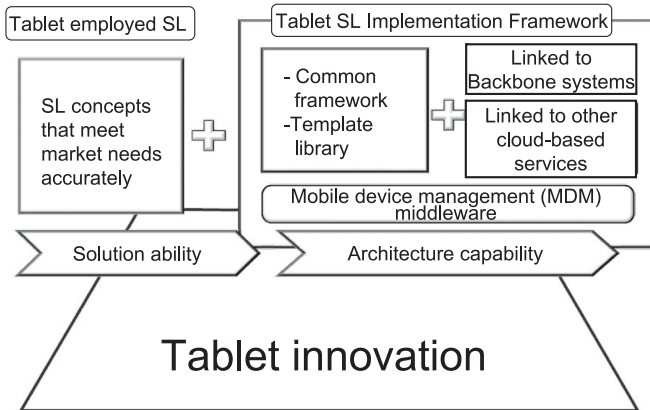
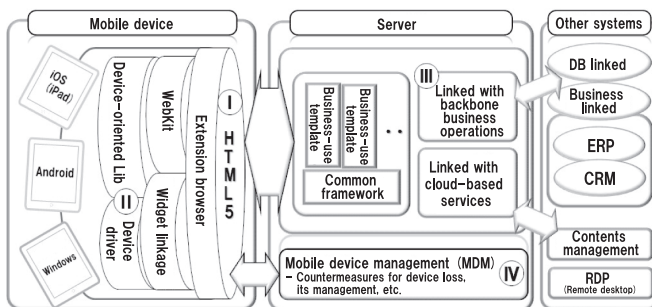Fig. 4   Development platform based on opinions from actual field situations.



Fig. 5   Diagram of hybrid framework.

configured with four components ( **Fig. 5** ).

1) An application development framework that employs an OS-independent HTML description
2) An API wrapped with advanced technologies is provided so that it can cope with a driver level knowledge to support various peripherals.
3) An interface linked to the backbone systems is provided as a component.
4) Capability of managing a smart device that requires a management method different to that which the PC, MDM (Mobile Device Management) service will support.

The concept of "Tablet Solution Implementation Framework" is employed for the NEC's business system platform, "SystemDirector Enterprise."

## 5. Conclusion

The global volume of tablet device shipments is expected to exceed that of notebook PCs by the year 2016 [1] . Currently, iPad and Android mobile devices dominate the market. However, the Windows 8 tablet released on 26th Oct. 2012 is attempting to catch up with the introduction of innovative UX (user experience) and UI (user interface) solutions. The smart device market is expected to present a climate of severe competition for these three OSs.

Such a market situation may provide users with an opportunity for a choice of hardware selection. However, it may also cause some confusion among users. In future competition will tend to die out due to trends in market refinement. However, we should remember that what a customer seeks is not the mobile device itself but the innovative "user experience" acquired from use of advanced mobile devices.

We will continue to research the tablet device market as it tends to heat up even more, and we will do our best to provide the optimum "user experience" that our customers are seeking.

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*iOS is a trademark of Cisco Systems, Inc. in the U.S. and other countries and is used under license.

*Android is a trademark or registered trademark of Google Inc.

*Windows is a registered trademark of Microsoft Corporation in the U.S. and other countries.

**Reference**

1) NPD DisplaySearch:Tablet Shipments to Surpass Notebook Shipments in 2016, 2012.7.3
http://www.displaysearch.com/cps/rde/xchg/displaysearch/hs.xsl/news.asp

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