

Experience Design on m-Commerce in China — Digital Marketing Oriented Social Innovation Design

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Abstract. Mobile service has been a new economic growth point and provided development opportunities by the popularization of the mobile device. In this paper, we take marketing as a point to discuss the social innovation design in m-Commerce.

Keywords: service design, e-Commerce, m-Commerce.

1 Challenge and Opportunity

Internet is rapidly changing the world where we live, and a number of innovative services are developed, which bring more benefits and convenience to users. Among those applications, the development of e-Commerce meets the desire that users are able to purchase goods without leaving their home and open convenient way for the remote trans-regional commodity trading, so they have become the powerful weapons for competing in the market. With the simultaneous development of mobile Internet, e-Commerce also began to penetrate into the mobile platform, which is called Mobile Commerce(m-Commerce).

Because the mobile device can be portable, there is closer relationship between mobile services and the daily activities of people. In China, more and more people rely on mobile phone to contact each other. On January 19, 2010, data of " report on 2009-2010 China's mobile Internet market conditions and the behavior of Internet users " latest released by Ai media marketing consultation showed that, as of December 2009, the total number of Chinese mobile phone users had been more than 2 million. At the same time, a number of emerging mobile services are increasingly popular, such as mobile micro-Bo, Mobile SNS and mobile games. Some web services which are popular for desktop applications have begun to develop versions for mobile platforms. Meanwhile, China's business development in 3G will greatly improve the mobile network environment, and enhance the ability to the spread of multimedia contents, which attracts not only more and more users, but also provide the new stage for the diversified and personalized mobile services design.

In this area, challenges and opportunities exist side by side. As more and more people join in the mobile network, more and more functions are developed, and then smart mobile devices will become the ideal end of the marketing services. Services based on the mobile platform are also showing a great potential to become the focus of the most compelling competition of next-generation mobile devices.

It is believed that although there are similarities between e-Commerce and m-Commerce because of the same origin, however, there is a big difference in practice. If just do some streamlining to services which are successful for the desktop applications, then migrate to mobile platforms, there will be this or that problems. In some senses, Mobile services are Unique and require not only to maintain the connection with the existing desktop applications and services, but also create and develop new interactive service models for the "mobile" and "changing" space. In this paper, we take marketing as a point to discuss the social innovation design in m-Commerce.

China's m-Commerce is still in its infancy, and studies focused more on business models and technological methods, but research on innovative approaches and related theory from the aspect of users' experience were relatively less.

Once the technical bottleneck is opened, experience design will become a key factor in m-Commerce. Mobile services innovative design which is experience-oriented, promotes concept of human-centered design, methods and forms of information interaction between persons, products and services and it optimize information environment to improve information services and provide innovative design solutions for users' good experience by studying the specific persons and their activities.

2 Basic Understandings on Designing for Digital Marketing in China

Because of the customers cannot "feel" the product directly, the marketing becomes very important and play an important role in m-Commerce. In digital marketing mode, the course is more interactive, and users are not passive acceptance of information, but directly involved in and have impact on the spread of marketing information. So there is a very popular idea named "permission marketing"¹, that is, the communicate is under the condition of permission and choice of users, the new challenge is how to provide timely, appropriate, clear, effective and sustained dialogue without annoying or in the pleasant manner when people need. We believes that the digital marketing services platform should be committed to establish the good interaction with the consumers, to improve the quality of services, and it will also directly affect the users' satisfaction on the evaluation of marketing services from the aspects of the information exchange structures, innovative models, ease of use and interface design, etc.. Users' experiences in the process of interaction with marking platform have a significant effect on the brand identity and the establishment of continuous service relationship.

The core of services design in m-Commerce is how to shape good relations and interactive experience which arousing the sense of value identity among users. Compared with the desktop, mobile service design requires more attention on user's psychology and behaviors in the "mobile" and "changing" space. The "mobile" and "changing" space creates exceptional conditions for the mobile services, and also brings new opportunities for developments. It is believed in this paper that the

¹ Ad appeared in Elle (September 1994).

following two ways should be found as the innovative ways for the mobile digital marketing services:

First, time- space-based innovation service;

At present, GPS has been used widely, which makes time- space-based information interaction possible, and information management and dialogue can be connected with specific time and place to achieve fixed-point delivery, so that different people in different time can get personal information that is matched with the specific environment. There is seamless connection between reality and virtual world: for example, when getting the menu and bills in a restaurant, people can get the promotions from others in the same time. It indeed is a way of digital marketing, which is a time-space based innovation service.

Second, the integrated solutions;

Cross-platform or multi-platform is an important feature of design of mobile services, and the mobile devices will connect equipments, space and people through a variety of ways. Net of things allows mobile devices to establish contact with surrounding service equipments, for example, mobile phone can dialogue with the self-charging devices in the parking lot to achieve timing and automatic payment features. The mobile service in the future is no longer limited to a single platform, and multi-platform integration solution will be the main direction of development.

Mobile service design innovation should take full advantage of these feathers and explore them to create many new types of digital marketing which establish a close interaction between the users and the marketing services to rich people's life experience.

3 Case Study : Smart Taste Commentator

3.1 Introduction

In China, with the improvement of income of urban residents and the lives, the number of people eating out is gradually increasing. An online survey in 2006 showed that among all the 6148 respondents, 29.6% of the respondents were very like eating out, 40.7% of the respondents were a bit like eating out; another online survey in 2010 also appeared the similar to the results of the survey in 2006, and students with 20-40 years of age and office workers are the majority of the respondents.²

China's "food culture" has a long history, and there are eight major cuisines and a wide variety of food. Food is widely believed to be a way to enjoy life, and with the quickening pace of life, the family of young Chinese white-collar workers does not want to spend time cooking at home, and often choose to eat out, especially those who like to go out shopping, dating and entertainment. Usually, they will concern about place, food taste, price, environment and services. So programs and website that introduce a number of well-known restaurants, dishes and prices are very popular, and sometimes these services will send discount coupons. These contents of recommended foods are mostly from consumers rather than businesses, which are more persuasive and attract a lot of young man who love "eat".

² <http://www.searchchina.net.cn/report/art/report229.htm>

In 2009, we worked with Nokia (China) Research Center and UI sector of the Finland headquarters of Nokia to conduct two workshops to design mobile services, and combined with some of the results of individual studies, ideas, methods and design principles. In those workshops, mobile services innovative design will be discussed from the aspects of users' experience and interaction design to provide valuable experience and references for China Mobile services design. One of the design team believe mobile services that offers "gourmet" should be a design opportunity, and the young white-collar workers may be the service's target audience, because they like making friends, entertainment, the pursuit of enjoyment, and with higher income. The key is that they like to try a variety of fresh food, and the focus of research is under which contexts people need such services, and which manner can be adopted to help the people in need through this service, we also try to find how to build the interaction model that agrees with daily activities, and how to make the process of "gourmet" hunting bring people the rich experiences.

3.2 Design Concept

The concept named "Smart taste Commentator" whose user group will be young white collar, especially those who like to eat out. It is an idea brought forward in a project which is cooperated by Nokia and Information art and design department, Tsinghua University. It aims to build a public Food & Dining comments/service platform, and is enlightened by the service of a website called "dazongdianping" in China. It provides a platform for recommending, finding, sharing and critiquing of restaurant and food area by mobile service. The following is a description of the design ideas.

Goals:

- Share: Share information easily and quickly (share information not only by the SNS website\ share the definite information from the definite group\gain some benefits when share information)
- Integrated : Integrated easily among the mobile phone、 the RFID tag and personal computers
- Communication friendly: One can easily read other's comments of the food before eating and also can add comments after eating
- Portable: The service based on mobile phone, It can be used everywhere
- Entertainment : Read and view other's words to have fun.
- Security : Each mobile phone has its own account, pay for the meal is safety
- Brand preference: Communicating by RFID, mobile and web.

Interaction Model:

The demo showed how to communicate by mobile service. As Fig. 1 has shown, users can get information of near restaurant through GPRS, and they can scan RFID of the menu by mobile phone to find the food which has good comments when arrived. After meal, they can input their comments by mobile phone or share with friends by internet to get credits, certain credits can exchange coupons, users can also pay bills by mobile phone directly. Fig. 2 has shown the information architecture of the service. This architecture was designed after context analysis and task analysis, and has been revised many times after tests.

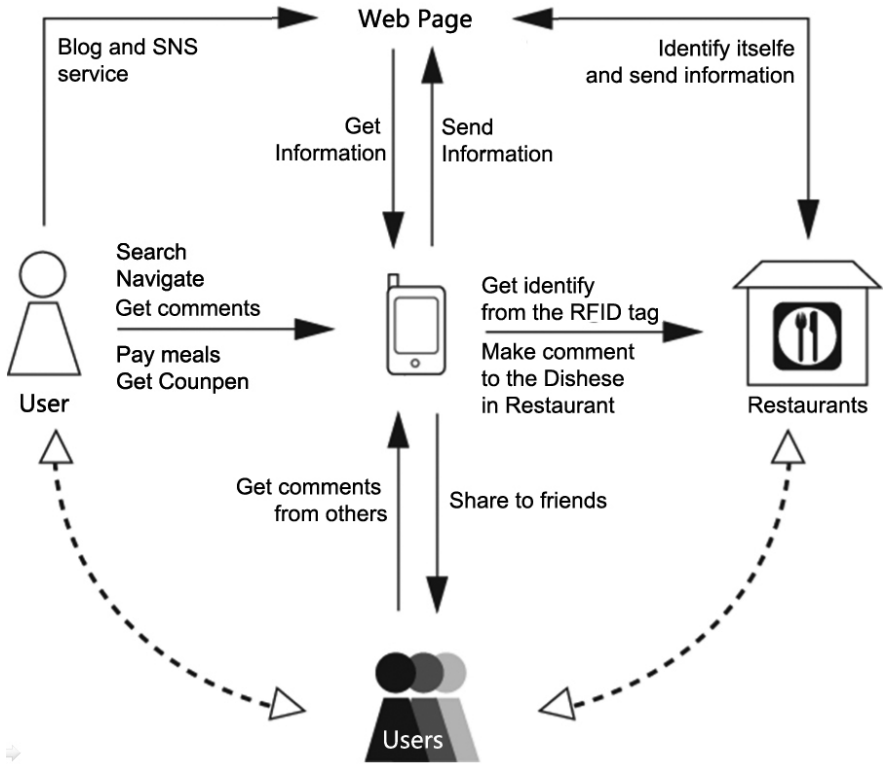


Fig. 1.

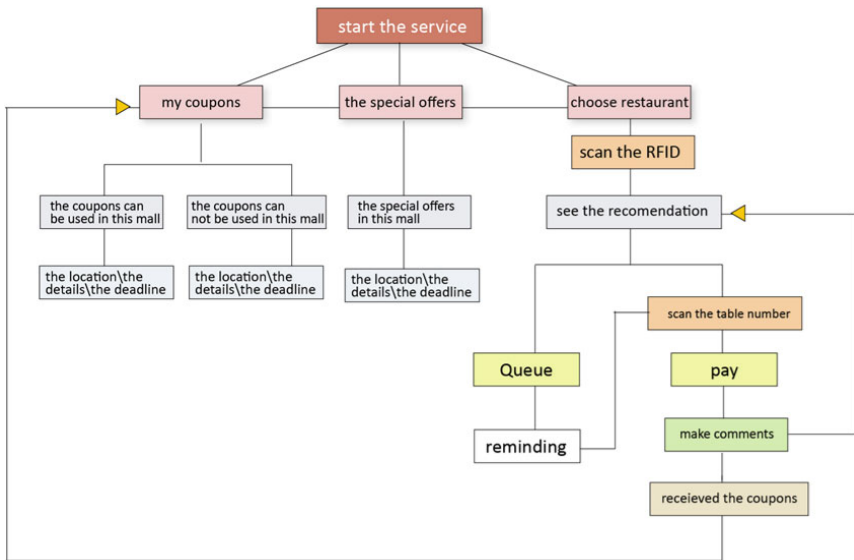


Fig. 2.

Interface Design:

In the first period of interface design, the frame of interface was made to give test, in the frame, the layout and basic contents were set, when testing, students followed and recorded user to find how they interact with the service, the survey and interview was executed at the same time. They revised the design after analyzed the feedback and make some revisions, and then the final interface design, as Fig. 3 shown.

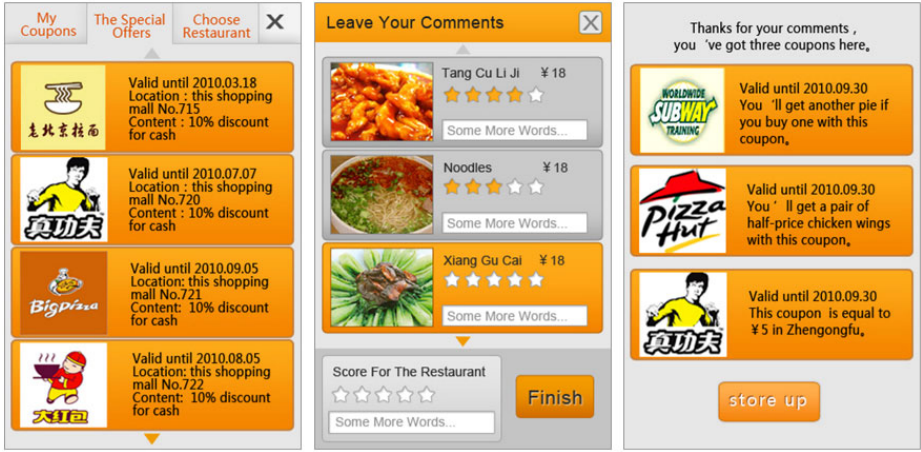


Fig. 3.

3.3 Design Method

Why do people choose A but give up B? The reason is that A brings better experience than B. For the value of the experience, Cagan once brilliantly pointed out that if the product want to be successful, it must have the functional characteristics and forms of "useful, easy to use and want to have " that should be identified quickly by consumers. What consumers are looking for is the product that can reflect their own values and quality and enrich their lives³. Broadly speaking, mobile services are also products, but this "product" is soft. The marketing services need to create a meaningful and pleasant living experience for users, and on this basis, to create some possible marketing opportunities, and establish brand value and identity of the value of marketing services.

Based on the above philosophy, we believe that innovative of services design should be built on the basis of deep understanding of target groups' life, and the designers need to first put themselves for the sake of users, and then the innovative design. Design research is the premise of innovative design. The aim is to discover design opportunities, determine the design goals, and propose specific requirements of innovative design, and propose design criteria to guide the creative design process.

³ Jonathan Cagan, Craig M. Vogel, "Creating breakthrough products: innovation from product planning to program approval", Published by Pearson Education, Inc, publishing as Financial Times Prentice Hall.

As mobile services are emerging application areas, not much successful experience can be referred to. In order to discover new opportunities, we surveyed and analyze marketing services that are more popular in China now, extracted a wealth of information, and condensed guiding basic design elements and also extracted some key words that can bring unexpected surprises and freshness to people, such as in the form of simplicity, entertainment, pleasure, interesting and new contacts, natural interface, convenient, smart, polite, open, sharing, mobile, integrated, personalized, custom, communication, auto-complete, change, and other forms. These elements are extracted out from investigation of the hundreds of popular cases in China, and these key words became the basis for generating new concepts. Fig.4 shows the evaluation and analysis on China storm music player interface.

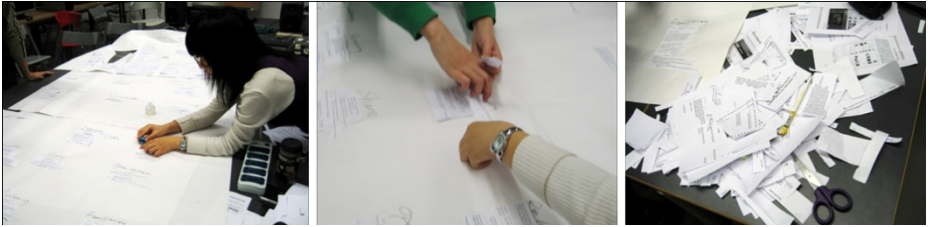


Fig. 4.

At the stage of the detailed design, the activity-oriented approach is adopted, and role-based scenario analysis is carried out, the activities law of role is reviewed and summarized, and the service design and the context where the role is are contrasted and fitted, we mentioned what will be the meaningful things for the target users through our research, then we discussed the concepts and conclude our design goal. Innovative design solutions were proposed based on the goal, user testing is conducted in real-life situation and interface design detail was revised many times, in order to make the design ease to use.

Activity-centered approach was proposed by the Norman, it can help designers better understand and grasp the psychology and behavior of uses in mobile and changing space, and it provide the research ideas to understand system relationship between people and things, human and material, time and space, behavior and meaning. To better understand the target group's activities, we took the field observation, interviews, personal experience and so on, kept records of observations and thoughts, these data were organized by scenario and use stories.

In above cases, the designers have analyzed the design trends through the survey of web service, they got clear objective and choose to start from the comments of restaurant, considering the feature of mobile service, integrated RFID, mobile and web service, brought forward valuable creative solution. This solution is not a simple copy of Web Marketing Models, but a kind of B2C, if according to the classification of e-Business. There is a point, consumers can give and share the comments, in other words, the “ads” is controlled by consumers. For the consumers, “real” information will be attained; For the merchant, good service will be spread, meanwhile, potential consumers can be attracted through the located based service. It is a double win. However, in the project, the interface design still needs new design, and more entertainment should be considered.

4 Conclusion

China digital marketing services platform can be divided into the following items, first, the network retail which takes place between the consumers, that is C2C (Consumer to Consumer); such as Taobao, eBay, market network, mainly for individual transactions, and it allows Internet transactions of unused items; second, direct selling, namely, B2C (Business to Consumer), suppliers directly provide marketing services to consumers, such as Dangdang, Dell computer sales website, which are direct marketing services established that use the network platform for individuals or groups. Due to the removal of the intermediate links of sale, direct marketing services have certain favorable price; third, relatively new way of group buying, that is C2B (Consumer to Business), a group of consumers are assembled to buy the products to achieve volume sales of the product at discounted prices. Group buying is usually initiated by the consumer, but also sponsored by the merchants. For example, buy 58 group buying networks, which substantially lowers prices to attract consumers through the increasing volume; fourth, trade services between enterprises, that is B2B (Business to Business), such as Alibaba, which is the large trading platform for enterprises⁴.

The first three modes are mainly discussed in this paper. The first three service models are directly to consumers, and there are certain similarities for them, and each model has its own advantages. In fact, some services platform is a combination of multiple modes. For instance, Taobao also provides group buying services (C2B), Dangdang also pushed C2C business recently, which allows customers to sell unused books online. After the investigation and analysis of the above different methods of network marketing, combined with the characteristics of mobile services, we review and summarize the basic advantages that the best mobile marketing services should have,

1. Personalized content services

If C2C or C2B the network services attract visitors due to its extensive product information and related contents, the mobile platform need more personalized and more targeted contents because of the restrictions of the small screen, which allows users for active choice or customization in accordance with the user's preferences. The rich contents should be cleverly hidden in the simple interface, and location-based services can be introduced (Location Based Service) and the corresponding content can be pushed based on the users.

2. The reasonable, improved and efficient service process

Good marketing services should provide the complete process for consumers including access to services information, consultation and purchase. The information exchange structure agrees with activities habits of people in daily life with simple and quick steps and high efficient services.

3. Democratization

Even for the brands that have a strong influence in traditional markets, they may also be consigned to limbo in online world. There is even more democratization in the

⁴ <http://baike.baidu.com/view/298840.html>

online world. Although there is still the market for the leading brands, people seems to believe the public comments, and the democratic service environment is more favored by the people.

4. Ease of use

Ease of use is the basic element for good experience, which is reflected by reasonable information structure and the interface design with clear layout and accurate information. Donald A Norman summarized the four usability principles of good design in his book "The Design of Everyday Things"⁵, namely: visibility, the correct concept model, the correct match and feedback; after years of tests, these four principles have broad applicability. For interface design, the violation of these design principles may lead to no utilization of the interface.

5. Offers and promotions

Offers and promotions are often the most powerful trump card for e-Commerce, which also is contributed to one of the elements that prompts people to purchase. Proper use of incentives and promotions can attract customers, and build good relationships. For example, now accumulate points which have emerged, etc., are conducive to maintaining customer relationships.

6. Safety

Because of the presence of network viruses and hackers, there is a certain security risks based internet payment. The network security is critical for the interests of the two parties of the transaction, and a variety of measures can be taken to increase the security of mobile devices termite payments, such as password, fingerprint identification and handwritten signatures.

7. Entertainment

Entertainment is a part of life, it can improve people's emotion and release one's pressure especially in the modern society. Entertainment based on reality world can bring lots of different new experience which will be popular among mobile device. It can work well in mobile time and mobile space, people can have some fun to killing time during walking, driving, riding by bike and riding by bus, etc. In the above case, we can add some entertainment element such as "finding hidden treasures game", user can find some accident pleasantly surprised present which could be a discount card or a tickets for changing a real gift, when they go out, the gift appeared according to their location in a special time in real world, it can be a good guide to digital-marketing and also a health way in life.

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⁵ Donald A. Norma., "The Design of Everyday Things", (P54,2003, Chinese Edition: translated by Qiong.Mei, publishing by Zhongxin Beijing).

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