3G Strategies of Mobile E-Commerce Development in 3G Age
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Abstract—The article summarized the characteristics of China mobile E-commerce in 3G age. Then it analyzed the problems of law, safety, technology, payment and distribution in current development. At last, it provided corresponding development strategies of accelerating mobile E-commerce development in China.

Keywords- Mobile;E-commerce;3G;Strategy

I. PREFACE

The third generation mobile communication system (3G) development in China is later than developed countries. China expanded the network size only in 10 cities in the TD-SCDMA technology in 2007. In the same year, Ministry of Information Industry published 130 types recommended communication industry standards involving WCDMA, CDMA2000 and TD-SCDMA after regarding them as industry-standard for the China communications. In the 2008 Beijing Olympic Games, six Olympic highlights business successfully implemented, including TD wireless bandwidth, wireless broadband Internet access, Olympic mobile TV, video on demand of the Olympic Games, Olympic Rapid Report, Olympic multimedia ringtone and mobile phone inter-conversation POC. In 2009 the Ministry of Information Industry provides 3G license to the telecommunication operation business. The users' number of 3G is rapid growth, up to the end of October 2009, China users number of 3G has reached 9770,000. According to the estimate, in 2013 Chinese 3G user quantity will surpass 100,000,000[1]. The development of 3G, enable people to enjoy on a global scale better seamless roaming, and handles images, voice, video and other media form, implementing Web page browsing, conference calls and other information service, dramatically promoting the development of m-commerce.

II. FEATURES OF MOBILE E-COMMERCE IN 3G AGE

Mobile e-commerce in 3G age has unique competitive advantages compared with traditional e-commerce.

A. No time and space limitations

One of the biggest advantages of mobile e-commerce is users can get the desired services, applications, information and entertainment anywhere and anytime. Wireless systems allow users to access any service within mobile network coverage. Users can find, select and purchase goods and services through their intelligence terminal enjoying their leisure time.

B. Service more personalized

Mobile computing environment can provide more mobile users of dynamic information, thus creating a better condition for personal service. Mobile users get greater flexibility in customizing services and information corresponding to their own needs and preferences.

C. Acquiring more timely

Mobile e-commerce users may purchase the implementation information anywhere, anytime. This means the timeliness of the information obtained. From the carrier's point of view, the user terminal can be used as a user's identity. As a result, business information can be sent directly to the user terminal, which further enhances the mobile user access to information timeliness.

D. Payment more easier

Users access a Web site on a mobile terminal for business, as long as they have been opened to female mobile payment function, a whole new mobile payment can be achieved. This payment can also be used in the beverage retail and retail segments of the ticket and so on to save sales and ecommerce sites to reduce the cost of sales in a large extent[2].

E. Credit mechanism more uniquer

To traditional e-commerce is concerned, the user's credit problems are interfering with their development of a major bottleneck, and m-commerce in 3G is regarded as obviously advantages in credit. Mobile numbers are unique, because the storage card of the user's information can determine a user's identity. For mobile e-commerce is concerned, this has certified the credit.

III. CHINA MOBILE DEVELOPMENT STATUS

Data in the development report of China e-commerce industry in 2008-2009 published by iResearch indicates that the 2008 China Mobile e-commerce market trade size is 0.21 billion RMB. It is expected that trade size will amount to 0.64 billion, growth of about 205% with the 3G commercial age.
2009[3]. IRResearch also expected that by 2012 the coast of the e-commerce trade size will reach 10.8 billion with a great development potential. This is determined by the mobile development status in China.

A. Supporting technologies is mature

The perfect combining of Internet, mobile communication technologies and other technologies has created mobile e-commerce. At the same time, these technologies have also been mature and expanded their ranges of application. Thus technical supports are created in order to further expanding into the mobile e-business development. These mainly include: Wireless Application Protocol (WAP), General Packet Radio Service (GPRS), mobile IP, Bluetooth and CDMA technology[4].

B. Policy guiding is distinct

In June 2007, “The eleventh five-year plan on the development of e-commerce” was published by Development and Reform Commission and the State Council Information Office. The plan promoted that “developing micro-payment services and the customers and business information services, exploring the different levels of consumer oriented new service model”[5]. Suggest of building mobile electronic commerce pilot project was specifically planned. In January 2008, Hunan became the first international mobile electronic commerce pilot province, this marked the national mobile electronic commerce pilot project was officially launched. National policies will speed up the application of wireless e-commerce and community.

C. Market is developing rapidly

With the successful transplant of Alipay in mobile phone platform and the maturity of the mobile payment technology and security improvements, phones are stronger, but price is more and more cheap. Operators provide sets of services to enhance the competitiveness of the developing packages, thus solve the tariff problems of m-commerce. The 2008 Olympic Games as the success of mobile e-commerce provides a large market environment support and m-commerce ushered in a golden stage. Mobile e-commerce related industry chain is definitely not a traditional industry as sound and smooth growth, but growth in the outbreak of rendering geometry.

D. User base is huge

Along with the globalization of the information technology revolution and the arrival of the times 3G, mobile phone became a major role of China's telecom service. It came in the most rapid development and the most active in the new horizons, its ability further enhanced the mobile communication. DCCI data (the Internet monitoring of authority) display, the number of Internet users is 350 million by the end of July 2009, mobile network card participation rate is 1.4%. The National Bureau of September 2009 communication industry monthly bulletin figures indicate China's mobile phone user’s number is 719.838 million. View from users group, cell phone users in basic includes consumer market in the medium-high extremity, instead of the Internet users of young people who is in the lack of ability to pay.

E. Application service field is extensive

Mobile e-commerce business service is extensive, this owe to the coordination between the users and the content providers. At present, mobile e-commerce has been occupied lots of industries: entertainment, news, travel, retail, finance, insurance, real estate, automobile, and so on. The application of mobile e-commerce is everywhere.

IV. PROBLEMS OF 3G MOBILE E-COMMERCE IN CHINA

While mobile e-commerce development in China is quickly, but there are so many unsatisfactory that makes its developing speed been restricted.

A. Legal protection problems

In the past few years laws and regulations are published in China one after another to guarantee the development of e-commerce, such as the electronic signatures, the electronic payment instructions (draft) of people's Bank, and so on. But facing to the prosperous development of mobile e-commerce, these are obviously inadequate. In e-commerce legislation China is undeveloped compared with developed countries, it brings various crime occurs frequently involved Internet and e-commerce. Disputes appear in the case of malicious hacker attacks, viruses, advertisement swindles, and intellectual properties of online music, software, movies and other.

B. Security problems

A unique threat to mobile device is easily lost and stolen. Wireless communication network compared to the wired network does not limited to geographical and communication cables for open communication can be achieved easily. This brings flexibility freedom to the wipe communication and at the same time it has also created many unsafe, such as the contents of communication could be tapped, the identity of both sides could easily be counterfeit and communication content could be tampered with, and so on.

C. Technical supporting problems

With 3G data service times, mobile terminal is no longer working in a closed network, but directly connected to the Internet. Therefore, efforts to reduce the probability of loss terminal through technical means to achieve identity authentication is an important factor in health development.

D. Mobile payment problems

M-commerce in the payment and credit not only crossed any bottleneck of wired B2C, but also increased a certain amount of difficulty because of its uncertainty of e-commerce sites. Prepaid way has a poor user acceptance. The consumer after first invest money has been involved cell phone with real identity, credit scoring and guarantee system. Therefore, how to troubleshoot 3G mobile payment has become the primary key of m-commerce development.

E. Distribution system problems

At present, distribution bottleneck has formed in China because of the logistics management system is not perfect and
it can’t catch up with the pace of development of m-commerce. There are many problems, such as service was unable to control and assurance, in response to a problem that occurs is too slow, overseas distribution cost exorbitance, the scope of the city is small. These problems limit the development of m-commerce business.

V. DEVELOPMENT COUNTERMEASURES OF 3G

To solve the problems of restricting the development of 3G in the era of m-commerce is not a fast process, it is a gradual process.

A. Enact mobile e-commerce related laws and regulations

As a new business, mobile e-commerce is still without clear industry specifications, including admission policy, regulatory policies, roaming between networks, resource sharing, service quality assurance, and so on. In particular, the earlier legislation should pay more attention to the importance of e-payment, consumer rights and personal privacy protection. In management, telecom regulatory agencies should consider to redesign the rules involved in the business of existing telecommunications services to the network resource. These rules will make the m-commerce market healthy and stable development.

B. Improve the mobile e-commerce credit system

It can reduce credit risk when establishing credit appraised system through mobile e-commerce terminal number of uniqueness and authenticity. Vigorously pursuing the real name system of mobile phone can put them into blacklist whose payments are always in arrears and this kind of record will make him very difficult to apply for loans and other financial services. At the same time universal mobile payment need create mobile phone users credit account, then your phone number means a user identity card number, so that there are more mobile electronic payment. This kind of micro-payment based on the carrier’s mobile can also make up for the whole community and consumer credit system of construction, an acceptable way of new electronic payment is formed.

C. Pay more attention to technical problems

Intelligent terminal will be the main force in the development of 3G, users can obtain new business experience through its multi functional consubstantiality. Intelligent terminal can store a large amount of users’ personal information. You can provide identity, e-commerce, e-banking and other business, these need comparatively smart terminal technology. Such as, extra large screens, screen pigment upgrades, millions of pixels with nice photo features, built-in games, ring tones, video playback, stand/call duration, and so on[6]. These technology solutions will accelerate the development of m-commerce.

D. Build secure and efficient mobile payment mechanism

Mobile e-commerce as a new thing, its business model need improvement, and building a secure and flexible mobile payment mechanism is the key to improving business model. There are three mobile payment funding sources: the first is from the call in the direct debitting; and second, the handset and bank card binding by a bank account; the third is to use the pre deposited method such as a mobile service provider to establish a special account there. On this basis, it is necessary to strengthen liaison and cooperation between operators and banks when building a secure and efficient mobile payment mechanism. Only this can eliminate obstacles in payment and provides a high speed network services at the same time enhancing the capabilities of the customer. The Bank of telecommunication operators should reduce mobile payment handling fee, allow mobile users to more easily select shopping payment method.

E. Perfect mobile e-commerce distribution system

Only developing modern logistics through efficient distribution and promoting integrated distribution proposal can popularize mobile e-commerce. This needs to set up logistics center suit for mobile e-commerce development, accelerating distribution system socialized and industrialization. According to consumers’ income, hobby, geographic distribution and other conditions, reasonable locating the sales territory should be done[7]. Then distinction logistics services policy can be taken in different sale regions, so as to maintain the mobile e-commerce activity in the construction of logistics sectors, improving the overall standard of service.

VI. CONCLUSION

With the 3G evolution, as the finance crisis revitalization and the industry energized, mobile e-commerce has been set on high expectations. Although at present mobile e-commerce exists many problems such as terminal security, payment, delivery, legal issues, but believe that by virtue of its own advantage and technologies continue to progress, these will be resolved. In the age of 3G, mobile business development has many opportunities but it is also a challenge, we can take advantage of this opportunity by leaps and bounds, enable mobile e-commerce to be a promoter in improving the quality of people life.

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