Chapter 8
Smartphone Market in China: Challenges, Opportunities, and Promises

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ABSTRACT
In this chapter, the current smartphone market in China is investigated and a comprehensive view of the Chinese mobile market is offered to the global audience. The history of the Chinese mobile phone market is introduced, the smartphone market’s benefits and challenges are presented, and the competition in smartphone apps’ market is demonstrated. Besides providing a comprehensive view of the Chinese mobile market, this chapter offers insight to the Chinese government on mobile market regulations and legal enforcement, promotes mobile phone users’ awareness toward mobile application threats, and presents opportunities in the Chinese mobile phone market to the global smartphone manufacturers, mobile application developers, and mobile phone security software vendors.

INTRODUCTION
The year 2012 marks the 25th anniversary of Chinese mobile services. In these past twenty five years, the Chinese mobile communication market has undergone tremendous growth. According to the 2011 Chinese Ministry of Industry and Information Technology’s 3rd quarter Report, the Chinese mobile phone market currently ranks number one in size worldwide with more than 920 million cell phone subscribers.

With the invention of the Smartphone, a great number of mobile applications have been presented to the Chinese mobile market. With the additional functionalities enabled by the mobile applications, however, significant threats also have confronted smartphone users. For example, the smartphone provides great convenience to users’ daily lives and enhances the way businesses are conducted. However, it also poses significant threats to both users and businesses.

DOI: 10.4018/978-1-4666-1981-4.ch008
According to AhnLab (2012), the global mobile security threats in 2011 have progressed aggressively. The major threats include: large number of the malicious codes that enable direct billing, malwares disguised as famous mobile applications, and significant number of privacy-violation applications targeted on personal commercial information. Goode (2010) also found that companies’ confidential information had been frequently accessed and stored on employees’ personal phones without the awareness of the company’s IT department. Evidently, the security of companies’ sensitive data today has become an even tougher job than in the past.

In this paper, we focus on studying the Chinese mobile phone market. First, we introduce the Chinese mobile phone history and the current market situation of the smartphones. Second, we describe the mobile application market in China, including the current popular mobile applications, and pre-installation market’s app competition. Third, we identify the challenges facing the Chinese mobile application markets, including the challenges to both the application developers and the users. Fourth, we provide possible solutions to the mobile application challenges. Last, we conclude by summarizing the paper and providing business opportunities for global mobile phone industries.

By investigating the current mobile phone market in China, we aim to provide insight to the Chinese government on mobile market regulations and legal enforcement, promote mobile phone users’ awareness toward the mobile application threats through various programs, offer comprehensive understanding of the Chinese mobile market to the global audience, and present insights and opportunities for the Chinese mobile phone market to the global smartphone manufacturers, mobile application developers and mobile phone security software vendors. It is our wish that through this paper, security awareness and countermeasures will be enhanced for the mobile phone users, government regulations will be established to protect the cyber space, and smartphones dealing with culture-specific security features will be made for the Chinese market.

**Chinese Mobile Phone History**

**Chinese Mobile Phone Development**

The first Chinese mobile phone service was introduced in 1987 by the former China Mobile Communications Corporation (CMCC). The first generation analog mobile phones used the standards of AMPS, TACS, and NMT. At that time, however, the communication signals were unstable and eavesdropping was a serious problem. The second-generation mobile phones used GSM and CDMA standards, most of which supported GPRS and WAP network services. It added the data transfer function to the simple call function. The third generation of mobile phones combined the wireless communication functionality with the multimedia communication ability. Currently, three standards are used in China: the United States’ CDMA2000, European’s WCDMA, and Chinese unique TD-SCDMA. Because the third-generation mobile phone has achieved significant improvement in the speed of data transmission, it can efficiently process video, music, graphics, e-commerce applications and other multimedia functions.

**Current Chinese Smartphone Market**

With economic growth and population expansion, the Chinese mobile phone market has become the world’s largest one, surpassing those of both India and the United States. With approximately 950 million Chinese mobile subscribers as of October of 2011, Wireless Intelligence forecasts that this number will reach one billion by May 2012 (Ablott, 2011).