

Chapter 9

Mobile Cyber Information Leakage: Users' Attitudes and Information Protection Strategies

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ABSTRACT

With the wide use of smartphones, mobile cyber has become an indispensable part of our lives. While smartphones are used almost every aspect of our lives, awareness of personal information protection is underdeveloped, and information leak has become one particular problem on mobile cyber. At the same time, personal information resources have become more valuable than ever. This chapter investigates users' attitudes toward cyber information leakage and methods to protect personal information. The software SPSS 19 was used to analysis the relationship among cyber environment, applicability and practicability of protection methods, economic cost, and overall evaluation (satisfaction). A suggestion that may promote personal information awareness and promote cyber security from technical, legal, and social aspects is also provided.

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1. INTRODUCTION

With the rapid development of mobile communication technology, information interactions between individuals are now more frequent than ever. Smart phones are the preferred device for web browsing, emailing, using social media and making purchases. Personal information is also transferring from PC (personal computer) to smart phones. The global smartphone users are 2.1 billion in 2016, with smartphone penetration rates still increasing. China, the most populous country in the world, leads the smartphone industry. The number of smartphone users in China is around 563 million in 2016. It is projected that approximately half of the Chinese population will use a smartphone by 2020 (Statista, 2016). Information security has become a major concern and the security of mobile cyber information is also facing with unprecedented challenges. Many lawless merchants and enterprises found methods to exploit personal information into their offense, especially through personal information value research by the social research institutions. There is a rapid expansion of information leakage in mobile network.

Most mobile apps require personal information to demonstrate authenticity and authority. However, improper authority will lead to a direct access to information by smartphone apps, which may cause personal information to leak occasionally or deliberately. In 2016, China's Android mobile phone privacy security report pointed out that, 58% of Android apps leak users' private information. They provided users' data to developers, advertisers and third parties of unidentified identities. There are a lot of leakage problems in apps. The user information is hard to protect. Wang et al. (2015) found that smartphone users in China were vulnerable to malware than anywhere else through multiple data comparisons. In addition to spam messages and harassing phones, malicious software such as decoy fraud, system destruction, malicious deductions, privacy theft and others have been constantly evolving.

This chapter will discuss the growing concern about mobile information security. A strategy to use questionnaire is discussed for investigating and analysis the information leakage state, as well as for information cognition and protection. Possible reasons for the mobile cyber information leakage are explored, and suggestions for preventing information leakage are provided.

2. CATEGORIES OF MOBILE INFORMATION LEAKAGE

Smartphone has become an indispensable part of modern life. With the growing maturity of mobile cyber technology, the use of mobile network is ever increasing. A series of O2O business apps, such as Baidu Takeout¹, Didi Kuaidi², and Uber allow phone users to do what they want to do without leaving their homes. Feng (2016)

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