

システム情報工学研究科修士論文概要

年 度	平成 25 年度	学位名		修士(ビジネス)
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論文題目 Analysis of Potential Risk on Android Applications based on Permissions (アンドロイド アプリケーションのパーミッション に基づいたリスク可能な分析)				
論文概要 Downloadable applications present many security issues on mobile devices, where the application maybe specifically designed to be malicious or can be exploited for malicious purposes. Consequently, mobile users are faced with the potential risk of downloading bad applications on their devices. With focus on Android applications, the purpose of this paper is to evaluate the potential security and privacy risk of applications in the Japan market based on the requested permissions data collected from Googleplay.com and AppBrain.com combined with a set of real usage data provided by Fuller, Inc., an Android application software company. Two risk scoring approaches and a set of permission rules were employed together with statistical analysis. The result indicates that applications which are distributed in the Japan market can be considered to be fairly safe. In addition, we find that free applications are likely to possess higher potential risks along with the more popular ones. Furthermore, by using Social Networking or Communication applications, user(s) are likely to be exposed to privacy risk(s). Rich functionalities may add higher potential security and privacy risk to application. However, for the benefit of having convenience and richer user experience, users may trade off their privacy information. Based on the permissions perspective, it is relatively safer to have some applications with limited functions than having one single application with multi-functions. Permission mechanism essentially is created as a security measure, while in practice it plays a role as way to settle agreement: users agree to compromise with the potential risk they may suffer in exchange with the services provided by the application. Although the potential risks of granting permissions certainly exist, it comes back to users' own-decision whether or not to take the risk.				
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