

Camera-based Attacks on Android Mobile Devices

SPEAKER Prof James Du

Associate Professor
Department of Computer and
Information Sciences
Temple University
USA

DATE 13 April 2017 (Thursday)

TIME 3:30 pm - 4:30 pm

VENUE G7315, 7th Floor
Green Zone, Academic 1
City University of Hong Kong
83 Tat Chee Avenue
Kowloon Tong

ABSTRACT

Today's mobile devices are very powerful and many mobile device applications (apps) have been developed and deployed. With the increasing usage of mobile devices, mobile device security has become a critical issue that affects billions of users. As the most popular mobile operating system, Android security has been extensively studied by researchers. However, few works have studied camera related attacks on mobile devices. In this work, we focus on security issues related with mobile device cameras. Specifically, we discover several new attacks that exploit mobile device cameras. We implement the attacks on real Android phones and demonstrate the feasibility and effectiveness of the attacks. Furthermore, we propose a lightweight defense scheme that can effectively detect these attacks.

BIOGRAPHY

Prof Xiaojiang (James) Du is a tenured professor in the Department of Computer and Information Sciences at Temple University, Philadelphia, USA. Prof Du received his B.S. and M.S. degree in electrical engineering from Tsinghua University, Beijing, China in 1996 and 1998 respectively. He received his M.S. and Ph.D. degree in electrical engineering from the University of Maryland College Park in 2002 and 2003 respectively. His research interests are wireless networks, security, and systems. He has authored over 200 journal and conference papers in these areas, as well as a book published by Springer. Prof Du has been awarded more than \$5 million US dollars research grants from the US National Science Foundation (NSF), Army Research Office, Air Force, NASA, the State of Pennsylvania, and Amazon. He won the best paper award at IEEE GLOBECOM 2014 and the best poster runner-up award at the ACM MobiHoc 2014. He serves on the editorial boards of three international journals. Prof Du served as the lead Chair of the Communication and Information Security Symposium of the IEEE International Communication Conference (ICC) 2015, and a Co-Chair of Mobile and Wireless Networks Track of IEEE Wireless Communications and Networking Conference (WCNC) 2015. He is a Technical Program Committee (TPC) member of several premier ACM/IEEE conferences such as INFOCOM (2007 - 2017), IM, NOMS, ICC, GLOBECOM, WCNC, BroadNet, and IPCCC. Prof Du is a Senior Member of IEEE and a Life Member of ACM.

All are welcome!



In case of questions, please contact Dr Cong WANG at Tel: 3442 2010, E-mail: congwang@cityu.edu.hk, or visit the CS Departmental Seminar Web at <http://www.cs.cityu.edu.hk/news/seminars/seminars.html>.