

Tracing the Arc of Smartphone Application Security

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ABSTRACT

The introduction of smart phones in the mid-2000s forever changed the way users interact with data and computation--and through it prompted a renaissance of digital innovation. Yet, at the same time, the architectures, applications and services that fostered this new reality fundamentally altered the relationship between users and security and privacy. In this talk I map the scientific community's evolving efforts over the last decade in evaluating smart phone application security and privacy. I consider several key scientific questions and explore the methods and tools used to answer them. Through this exposition, I show how our joint understanding of adversary and industry practices have matured over time, and briefly consider how these results have informed and shaped technical public policy in the United States. I conclude with a discussion of the open problems and opportunities in mobile device security and privacy.

CCS Concepts/ACM Classifiers

- Security and Privacy, System Security

Author Keywords

Mobile platform security, program analysis

BIOGRAPHY

Patrick McDaniel is a Distinguished Professor in the School of Electrical Engineering and Computer Science at Pennsylvania State University, Fellow of the IEEE and ACM, and Director of the Institute for Networking and Security Research.



Professor McDaniel is also the program manager and lead scientist for the Army Research Laboratory's Cyber-Security Collaborative Research Alliance. Patrick's research focuses on a wide range of topics in computer and network security and technical public policy. Prior to joining Penn State in 2004, he was a senior research staff member at AT&T Labs-Research.

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