

COMPUTER SCIENCE COLLOQUIUM

“Smartphones (Android 2) in Foreign Wars: Locking Down Linux, Dalvick, Software Apps, and Accessories”

Dr. Jeffrey Voas

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&

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In conjunction with the IEEE Reliability Society

Abstract

Recent advances in the hardware capabilities of mobile hand-held devices have fostered the development of open source operating systems for mobile phones. This new generation of smart phones such as iPhone and Google Android are powerful enough to accomplish most of the tasks previously requiring at least a personal computer.

This talk will discuss the cyber threats that stem from these new smart device capabilities and the online application market for mobile devices including malware, data exfiltration, exploitation through USB, and user and data tracking. We will present the ongoing NIST/GMU effort to defend against or mitigate the impact of attacks against mobile devices by analyzing the source code and binaries of mobile applications, hardening the Android Kernel, using kernel network and data encryption, and controlling the communication mechanism for synchronizing the user contents with computers and other phones.

This talk will also explain the enhanced difficulties in dealing with these security issues when the end-goal is to deploy security-enhanced smart phones into military combat settings.

Biography

Dr. Jeff Voas is the IEEE Division VI Director and an IEEE Fellow. He was President of the IEEE Reliability Society (2003-2005 & 2009-2010), IEEE Reliability Engineer of the Year in 2000, and an SAIC Technical Fellow (2005-2009). He received his Ph.D. in computer science from the College of William and Mary. Currently, Dr. Voas is a Computer Scientist at The US National Institute of Standards and Technology (NIST). Visit http://csrc.nist.gov/staff/rolodex/voas_jeffrey.html for more details.

Professor Angelos Stavrou received his PhD from Columbia University. He is an Assistant Professor in Computer Science at George Mason University. Professor Stavrou's research interests are Large Systems Security & Survivability, Intrusion Detection Systems, Privacy and Anonymity, Security for MANETs and Mobile Devices. Visit <http://www.cs.gmu.edu/~astavrou/> for more details.

The colloquium is open to the general public

Date: Friday, April 29, 2011
Time: 10:30am to 12:00pm
Location: Room: ECS South 2.410
Host: Professor Eric Wong
(Refreshments will be served at 10:15am)

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