

THURSDAY
FEBRUARY 10, 2005

Scaife Hall Auditorium
Room 125

4:00 PM
Refreshments—3:30 PM

CHALLENGES IN EMBEDDED SYSTEM SECURITY



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Philip Koopman is an Associate Professor at the Carnegie Mellon University Electrical and Computer Engineering Department, with an additional appointment to the Institute for Software Research, International (ISRI) in the School of Computer Science. Dr. Koopman's research interests focus on dependable distributed embedded systems. He has previously held positions with various users and creators of embedded computer systems, including the U.S. Navy submarine force, Harris Semiconductor, and United Technologies. In addition to authoring three books and the usual assortment of papers, Koopman is a named inventor on 25 U.S. patents on embedded system technology and applications.

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For more information:
<http://www.ece.cmu.edu/seminar>

Embedded computers account for the vast majority of all processors in use today. But, very little attention has been given to security for these systems. While attacks on Internet washing machines aren't front-page news today, perhaps malicious takeovers of automobile and airplane control systems will be in the news tomorrow. Vulnerabilities that could affect our safety and everyday life are being created every day. We are fortunate that attacks haven't begun in earnest.

This talk will outline why both designers and researchers should be paying more attention to embedded system security. It will also discuss some ways in which embedded systems differ from the enterprise and desktop systems that most security work currently concentrates on. The challenges are significant, and will likely require creating approaches unique to some classes of embedded systems. It would be nice to understand challenges and potential solutions before embedded system attacks are a hot news item.