Hacker Avoidance Tactics:
Saving Yourself from a Black Hat!

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Atredis Partners
Overview

Bene Diagnoscitur, Bene Curatur
• “That which is well diagnosed is well cured.”
• Research Driven Security Consulting
• Advanced Secure Design & Development
• Advanced Penetration Testing
• Advanced Risk Consulting

Josh Thomas
• >15 Years in the field
• Focus on development, hardware design, architecture, algorithms, machine learning, exploitation
• Math geek who works on “Math-y” things

People we commonly help
• Manufacturers
• Consumers
• 3rd Party Vendors
Today’s Focus

Breaking the rules of the past
  • Typical problems:
    • Bugs from the 80’s to the present
    • Avionics and Formal Verification

Defining the rules of the future
  • Considering the value of hacking as innovation
Setting
Expectations

Hacker
• A person who learns how to interact with a system in an unplanned way

Define
• Attack
• Security
• Exploitation

Audience Question
• How many devices have we looked at and not gained access?
A Brief History of Failure: The Known Bad
A Brief History of Failure: Logic Flaws
A Brief History of Failure: Debugging and Backdoors
A Brief History of Failure: Authorization, Crypto, Bootloaders
Academia & You:
Avionics and Formal Verification
Risk and Value: The utility of data and context
Innovation: Hacking Forward

Homework:

1) _______ is disruptive because it intrinsically makes us re-evaluate the rules of the system we are working on.

2) _______ helps us capture more revenue and market share as it positions us to lead the industry.

3) _______ drives us to push the boundaries of our industry by understanding those boundaries.

   A) Hacking
   B) Innovation