Security Issues on Embedded Systems

• Physical Security
  – Think out command sets
  – Appropriate Controls for the Application
  – No BACKDOORS!

Web Based Interfaces

• Security Issues all over the place
  – Common Carrier - can be tapped
  – Underlying Software is incredibly complex
  – Web servers are vulnerable
Web Threats

- **Integrity**
  - Modification of User Data
  - Trojan Horse Browser
  - Modification of Memory
  - Modification of message traffic in transit
- **How to fight?** Cryptographic checksums

Web Threats

- **Confidentiality**
  - Eavesdropping on the Net
  - Theft of Information
  - Theft of data from client
  - Info about network configuration
  - Info about which client talks to server

Web Threats

- **Denial of Service**
  - Killing of user threads
  - flooding machines with bogus requests
  - Filling up disk or memory
  - Isolated machines by DNS attacks
Web Threats

- **Authentication**
  - Impersonation of legitimate users
  - Data Forgery

Stuff to Review

- Chapter 1-3 of UCOSII book
  - Understand Concepts!
- Types of RTOS
- Semaphores
- MCORE Architecture
- Lab Work Review
- VHDL Review

Test Review

- Security on Embedded Systems
- Hardware Software Tradeoffs
- VHDL work
Transmeta Corporation (TM)

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<th>Relative Volatility</th>
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The Bet was under $20 before Dec 15th!

Homework Assignment

Remember the Lab Demos are on the 14th! Sign up with Ryan Today!

Thursday: Test2