

Lecture 10 Outline

Reading: *text*, §23.4; 2; [15–17]

Assignments due: Homework #2, due April 27, 2011 at 11:55pm

Discussion Problem. In 2003, Senator Orrin Hatch said he wanted copyright holders to be able to use special-purpose hardware to prevent piracy.

Sen. Orrin Hatch, R-UT, said he was drafting legislation to require devices in PCs permitting the destruction of hardware used for wide-scale copyright infringement by sending a secret command to the remote computer. A copyright holder would be required to offer two warnings before the “kill switch” was activated and the computer destroyed or permanently disabled, Hatch said.¹

1. What are the arguments in favor of Sen. Hatch’s proposal?
 2. What are the arguments against Sen. Hatch’s proposal?
 3. If this proposal had been adopted, what safeguards should be put into place to prevent unauthorized activation of the “kill switch”?
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1. Aslam
 - a. Goal: Treat vulnerabilities as faults
 - b. Coding faults: introduced during software development
 - i. Synchronization errors
 - ii. Validation errors
 - c. Emergent faults: introduced by incorrect initialization, use, or application
 - i. Configuration errors
 - ii. Environment faults
 - d. Introduced decision procedure to classify vulnerabilities in exactly one category
 2. Models of Attacks
 - a. Example attack: rsh and synflooding (“the wily hacker”)
 - b. Capabilities and requires/provides models
 - c. Attack trees
 3. Access Control Matrix
 - a. Subjects, objects, and rights
 - b. Primitive commands: create subject/object, enter right, delete right, destroy subject/object

¹PoliTech mailing list (June 19, 2003, at 10:12AM).