

Lessons from the Sony CD DRM Episode

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05/09/09

Sony DRM Fiasco

Lessons from the paper:

- Music DRM ineffective of preventing mass piracy
- Increased complexity does not imply increased security
 - Emphasizes the security principle, Economy of Mechanism
- User experience matters
 - Emphasizes psychological acceptance
- Incentives matter
 - Music Labels
 - Risk averse
 - Want to please users
 - DRM manufacturers
 - Risk tolerant
 - Want to please Music Labels
 - Users
 - Exercise full rights

Incentives of Record Label

- Prevent CD-to-CD copying
- Limited distribution
- Enables redundant selling

Goals of DRM Manufacturers

- Prevent copying
- Build install base
- Increase values to customers
- Control standards
- Data harvesting

User's Interests

- Fair use rights
- System security
- System reliability

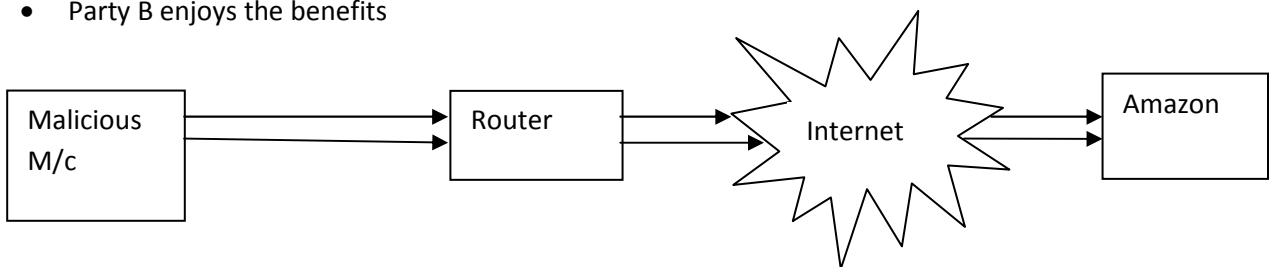
- System transparency
- Privacy

DRM Manufacturer's Sins

- Invaded user privacy
- Harmed legal users
- Illegal users left ok
- Open back doors to user system
- Failed to obtain consent
- Violated other people's copyrights
- Restricted some legal rights of users
- Root kit hid all files and process whose name begins with "\$sys\$"
- No uninstall
- Created directory with system services and open permissions
- Active-X uninstallation method
 - Install Active-x control
 - Parameter to Active-X control specifies location to download dll for uninstallation and execute its code

Incentives Misalignment

- Party A pays for security
- Party B enjoys the benefits



The malicious machine floods Amazon with packets having random source IP addresses. The problem can be solved by having Egress filter in the router and screening for packets with return address other than the allowed prefixes (eg 130.245.15.*)

This leads to incentives misalignment because the benefit is for Amazon while the ISP pays and works for it.