ECS 235B Module 7
Miscellaneous
Copy Flag and Right

• Allows possessor to give rights to another

• Often attached to a right (called a flag), so only applies to that right
  • $r$ is read right that cannot be copied
  • $rc$ is read right that can be copied

• Is copy flag copied when giving $r$ rights?
  • Depends on model, instantiation of model
Own Right

• Usually allows possessor to change entries in ACM column
  • So owner of object can add, delete rights for others
  • May depend on what system allows
    • Can’t give rights to specific (set of) users
    • Can’t pass copy flag to specific (set of) users
Attenuation of Privilege

• Principle says you can’t increase your rights, or give rights you do not possess
  • Restricts addition of rights within a system
  • Usually *ignored* for owner
    • Why? Owner gives herself rights, gives them to others, deletes her rights.
Quiz

Does Linux obey the principle of attenuation of privilege?

• Yes, because a subject cannot give others rights it does not possess. Nor can it increase its rights, as it has full rights over whatever it creates; it can deactivate the rights, but it still has them.

• Yes, because no user has as many rights as root, and so root’s privilege is attenuated to the other users.

• No, because a subject can acquire rights it does not have, for example if another subject changes file access permissions.

• No, because processes all have the same privileges as their owners.