

# COP 4600 Operating Systems Fall 2010

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Office hours: Tu-Th 3:30-4:30 PM

# Lecture 13 – Tuesday October 5, 2010

- Last time:
  - Heterogeneity; little-endian and big-endian representation
  - Timing, response time.
  - Trusted intermediaries
  - Case study the X11 system.
- Peer-to-peer systems
- Remote Procedure Calls
- Today:
  - Presentation of the RPC paper by Birell.
  - Domain Name Service (DNS)
  - NFS (Network File System)
  - Virtualization: Threads, Virtual memory, Bounded buffers. Virtual Links
- Next time
  - Thread coordination with a bounded buffer
  - Race conditions

# DNS Dictionary

- Domain name □ an identification label that defines a realm of administrative autonomy, authority, or control in the Internet, based on the Domain Name System. The top-level domains (TLDs) are the highest level of domain names of the Internet; they form the DNS root zone. There are 20 generic top-level domains and 248 country code top-level domains
- Authoritative name server □ gives original, *first-hand*, definitive answers; holds either the name record or a referral record for the name
- Authoritative record □ first hand information about a host name
- Naming authority □ an Internet administrative authority allowed to add authoritative records to a name server
- Referral record □ binds a hierarchical region of the DNS name space to another server that could help resolve the name
- Recursive name service □ a DNS server takes upon itself to resolve a name rather than provide a referral record.
- Idempotent action □ action that can be interrupted and restarted from the beginning any number of times and still produce the same result as if the action had run to completion without interruption