

CMSC 711 - HOMEWORK 1

Name:

DUE: February 6, 2007

TCP Questions

1. What is the advantage of having the retransmission timeout close to the round trip time of a connection?
2. What is the disadvantage of having the retransmission timeout close to the round trip time of a connection?
3. How is the congestion window changed during slow start? ("Exponential" is not a precise enough answer.)
4. "Fast recovery" is possible because "fast retransmission" does what? Rephrased, why is a return to "slow start" not required?
5. What is the purpose of the receiver's advertised window? What does it mean when the advertised window is "small"?

6. Why does the SYN flag of TCP occupy a sequence number?

7. What sequence of system calls is required for an active open ("client")? System calls include bind, listen, accept, select, read, write, connect, socket, shutdown, close.

8. What sequence of system calls is required for a passive open ("server")?

Wireless Questions

9. What is the hidden terminal problem?

10. How does RTS/CTS solve the hidden terminal problem?

11. Why does CSMA/CA require packets to be ACKed?

12. How does slotted aloha improve performance over aloha?