CMPT 371: Data Communications and Networking Assignment (3)

Due: Nov 2, 2012

(P1 – 10 points) Consider GBN and SR protocols with the sequence number space of size k. What is the largest allowable sender window size that will avoid the confusion of a retransmitted and a new packet with each of these protocols?

(P2 – 10 points) We discussed that the applications with the need for finer control on timing and data of their transport segment choose UDP over TCP.

 (a) Why does an application using UDP have more control of what data is sent in a segment?
 (b) Why does an application using UDP have more control on when the segment is sent?

(P3 – 30 points) WireShark

(1) Download and install a copy of WireShark Packet Sniffer from:
http://www.wireshark.org/download.html

Installation guide is provided with the software download, within your book, and on the companion website of your book.

(2) Run Wireshark on your computer. While you are running Wireshark, start a web browser and load a web page of your choice. Answer the following questions based on what you see in your Wireshark:

 List the 3 different protocols that appear in the protocol column in the unfiltered packet-listing window.

 What is the IP address and TCP port number used by your client computer (source) to connect to the web server?

 What is the IP address and port number used by the server?

 What is the sequence number of the TCP SYN segment that is used to initiate the TCP connection between the client computer and the server?