Lab-Sheet 4

Run, Trace, Run, Trace, ...

In today's lab you will be looking at the "*Stop-N-Wait*" and "*Sliding-Window*" features of data transmission protocols. Your goal is to compare them by performing trace analysis with NS2.

Exercise 1. Open up your browser and go to the following URL link:

Go through the explanation from the link above to understand differences between the two protocols *Stop-N-Wait* vs. *Sliding-Window*.

Note: You must edit the B1-stop-n-wait.tcl and B3-sliding-window.tcl files (find them on vision under Lab 4) for compatibility with NS2. The shape specifier must be changed on lines 28 and 29 from "rectangular" to "square" in both files. Lines 84 and 85 of the B3-sliding-window.tcl file must also be commented out.

Exercise 2. In this exercise, we want you to understand NS2's tracing facility which is used to generate a trace file containing information on all communications within the network. An example of how to do this is provided at URL, under *Post Simulation*, then *Trace Analysis Example*. Go through the explanation from the link above to understand the trace file fields.

Further information on using the tracing facility can be found at URL

Exercise 3. Now modify your networks from labs 1, 2, and 3 to generate a trace file for each one.

Lab 1 >> lab1.tr
Lab 2 >> lab2.tr
Lab 3 >> lab3.tr

Have a look through the trace files — does anything stand out?

Note: Complete the observation/results and discussion sheet for each lab (it is on vision), also keep your Tcl files (labs' scenarios) in a safe place. You need to submit both (results discussion sheet and Tcl files) later on as part of coursework.

Remember, for all the lab sessions the observation and discussion (report) is an individual work which means that **MUST** be your own work.