**CSE 8349**

**Advanced Network Security**

Project 2.

Due on: February 26th

Presentations Beginning March 5th

Audit SMU Engineering Network

A network audit will include general information about the subnet, as well as details.

Please answer the following questions within the report:

* List all of the nodes on the subnet.
* What ports and services are available on the nodes?
* What is the OS of the nodes?
* Are there nodes not available? Why?
* Is Traceroute available? Why or why not?

Some services to test for (this is not a comprehensive list) you can provide some of your own as well:

FTP, Traceroute, SCP, SSH, Telnet

What to submit: The report

Presentation: Consider a 10-25 minute class presentation to discuss the solution

Note: You are not to perform any penetration testing. You are to only scan the network. You should stick with addresses ending with lyle.smu.edu, engr.smu.edu or seas.smu.edu.

**CSE 8349**

**Advanced Network Security**

Project 2 (Alternate).

Due on: February 26th

Presentations Beginning March 5th

Establish and use a “covert” channel

You will write a program to accept both “regular input” and “covert input”. The program will transmit the “regular input” over a channel in the payload as expected by a normal application. However, the program will also transmit the “covert input” at the same time in ways that are not obvious.

A receiving program should interpret the “regular channel information” as well as the “covert channel information” and print the information.

A network sniffer should be used to verify the implementation of the covert channel.

Please include the following in your report:

* Source code of the sending and receiving programs.
* Selected networking sniffing snapshots?
* Test cases?
* A discussion of difficulties encountered in the implementation
* A discussion of the consequences of the existence of such channels.

(Note, if you have an idea for a covert channel that doesn't explicitly meet all these requirements, then talk to me as this can be flexible.)

What to submit: The report

Presentation: Consider a 10-25 minute class presentation to discuss the solution