

National Institute of Technology Calicut
Department of Computer Science and Engineering

Winter Semester 2020 – 2021
CS3093D: Networks Laboratory

Evaluation Question for Experiment No. 10

Harrison and Leonardo are staying in Brisbane city in Australia. A public wifi access point is installed in the city. Harrison is staying 100 m away from the Brisbane city access point in the east direction, and Leonardo is staying 100 m away from the same access point in the west direction. The access point is working properly in the daytime. Meanwhile, in the nighttime, the RTS/CTS unicast messages are disabled. Harrison and Leonardo use an application that sends data to the nearest access point at a constant bit rate. Assume Harrison and Leonardo started the application at the same time. Consider both the scenarios and recreate them in an ns3 simulator. To imitate the real wireless scenario, consider the loss models, loss between the node and the Access point is 50dB.

[Hint : [ns3/examples/wifi/wifi-hidden-terminal.cc](https://www.nsnetworks.org/examples/wifi/wifi-hidden-terminal.cc)]

- A) Calculate the packet loss ratio, number of transmitted packets, number of the received packets, and throughput in night and day time(For both flows).
- B) Change the loss models and calculate the packet loss ratio, number of transmitted packets, number of the received packets, and throughput at night and day time.

Deadline: 26-04-2021 03:30 PM