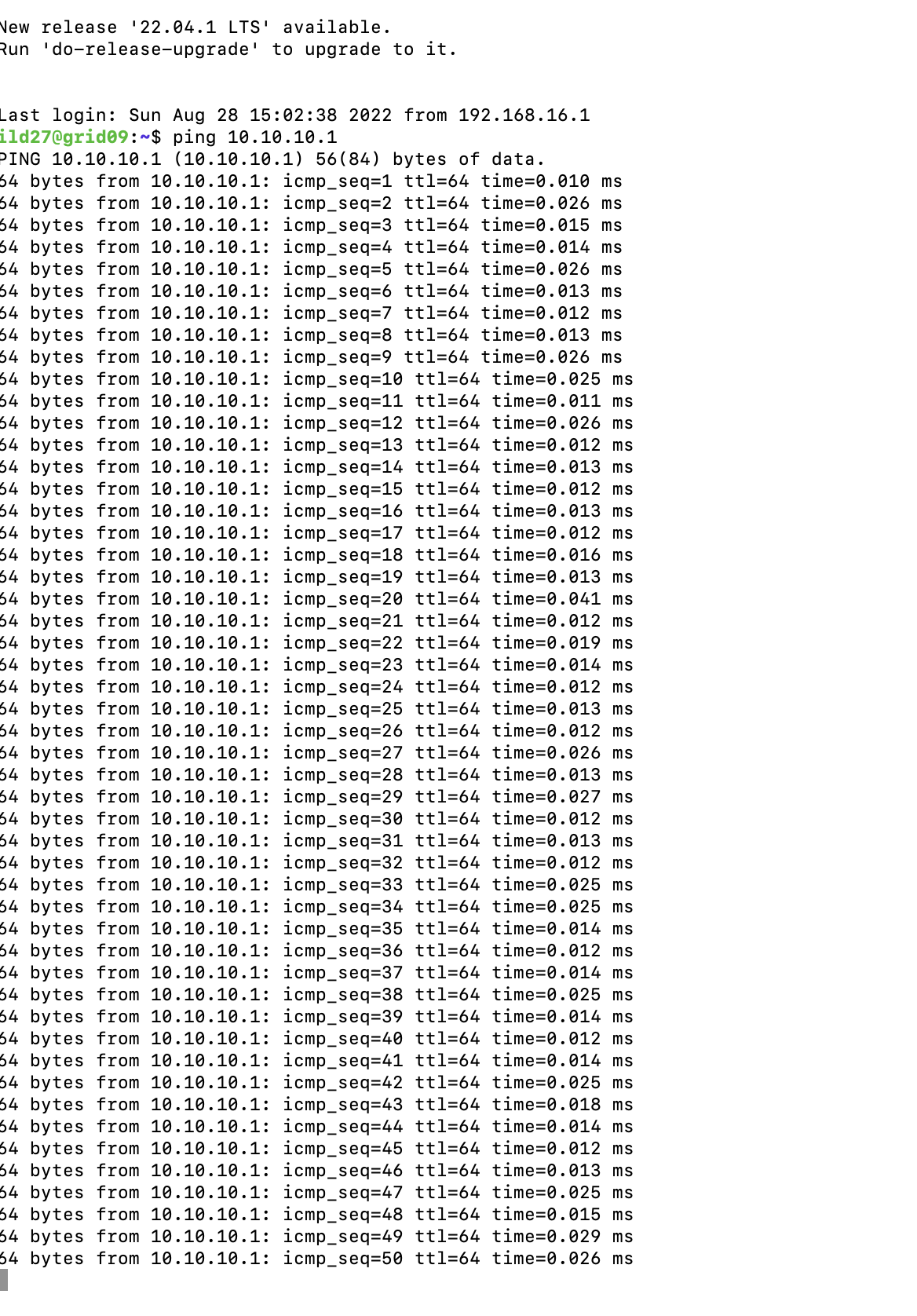
**ECE 430**

**Laura and Joshua**

**Lab 7**



**Figure 1:** ping working on the transmitter

Table

Description automatically generated

**Figure 2:** mgen Tx and Rx



**Figure 3:** plot-traffic (without --mgen-seq)

Chart, line chart

Description automatically generated

**Figure 4:** plot-traffic (with --mgen-seq) showing individual packets

Dragonradio is using the FIFO queuing method by default. That is why, the mgen sequence number increases as a function of time.

**LIFO queue**

Chart, line chart

Description automatically generated

**Figure 5:** overall plot of mgen sequence number vs. time

A picture containing calendar

Description automatically generated

**Figure 6:** overall plot of mgen sequence number vs. time showing individual packets, going from low to high and then from high to low.

From the middle (t=50 sec), it is following a LIFO transmission, where the last packet is being displayed first. That is why, we see a linearly decreasing plot (opposite to that of FIFO). However, for the first 50 seconds, it is acting as a FIFO.

Even when we zoom into individual packets, this can be seen for t > 50seconds.

**Tail drop queue**

Chart, line chart

Description automatically generated

**Figure 7:** overall plot of mgen sequence number vs. time for 5000

A picture containing chart

Description automatically generated

**Figure 8:** Zoomed in plot of mgen sequence number vs. time for 5000

A picture containing diagram

Description automatically generated

**Figure 9:** Packets view for plot of mgen sequence number vs. time for 5000

Diagram

Description automatically generated with medium confidence

**Figure 10:** Plot of mgen sequence number vs. time for 5001

Compared to RED, taildrop seem to be a fairer queuing method as all packets in the bursty transmission (5001) is getting through, and very less queue drops can be seen. However, it should be noted that there are some queue drops in the 5000 line.

**RED queue**

**Line chart

Description automatically generated**

**Figure 11:** Overall plot of mgen sequence number vs. time for 5000

A picture containing chart

Description automatically generated

**Figure 12:** Zoomed in plot of mgen sequence number vs. time for 5000

A picture containing diagram

Description automatically generated

**Figure 13:** Packet view for plot of mgen sequence number vs. time for 5000

A picture containing calendar

Description automatically generated

**Figure 14:** Plot of mgen sequence number vs. time for 5001

It can be seen that the RED algorithm is not fair for the bursty transmission as there are a lot of queue drops in this. So, Tail drop is better for this scenario.