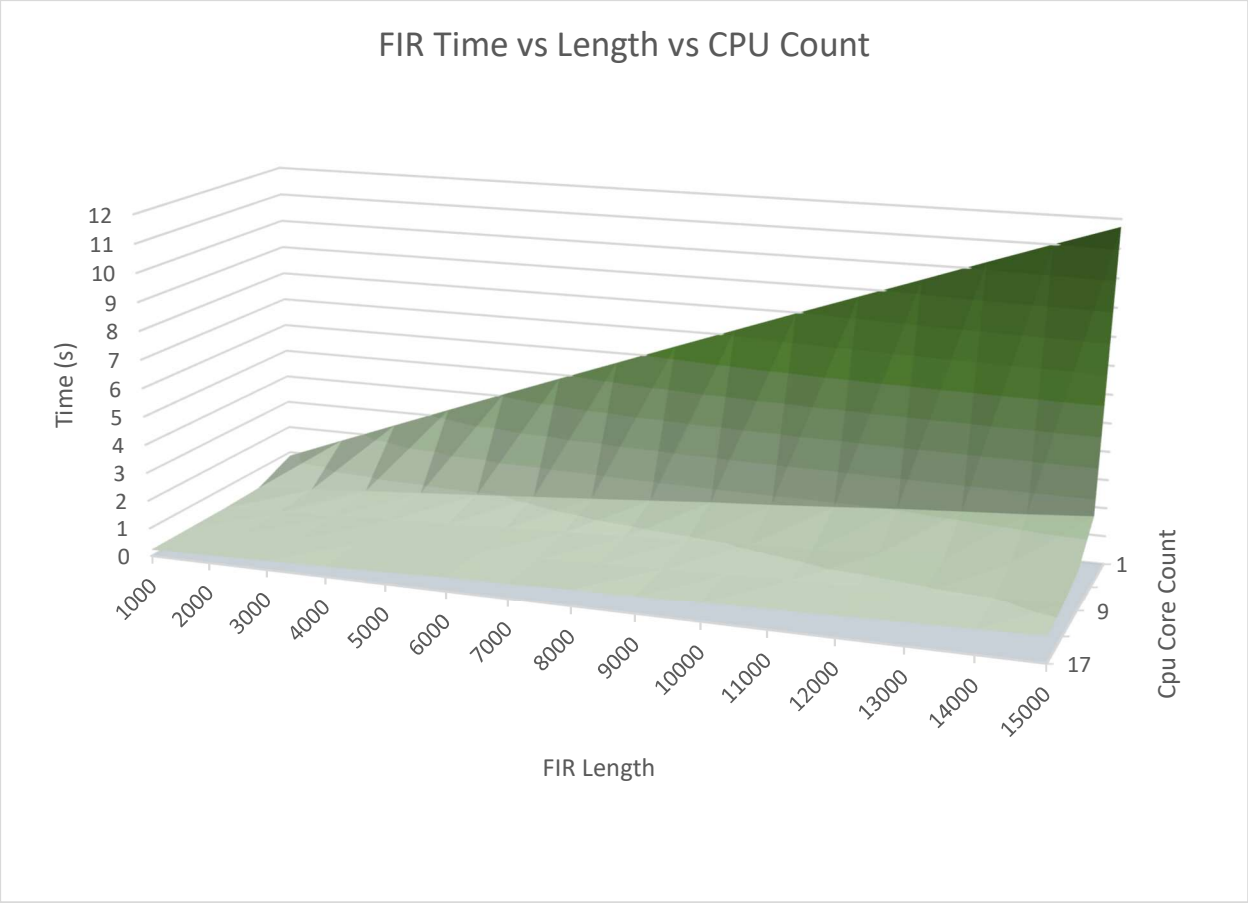
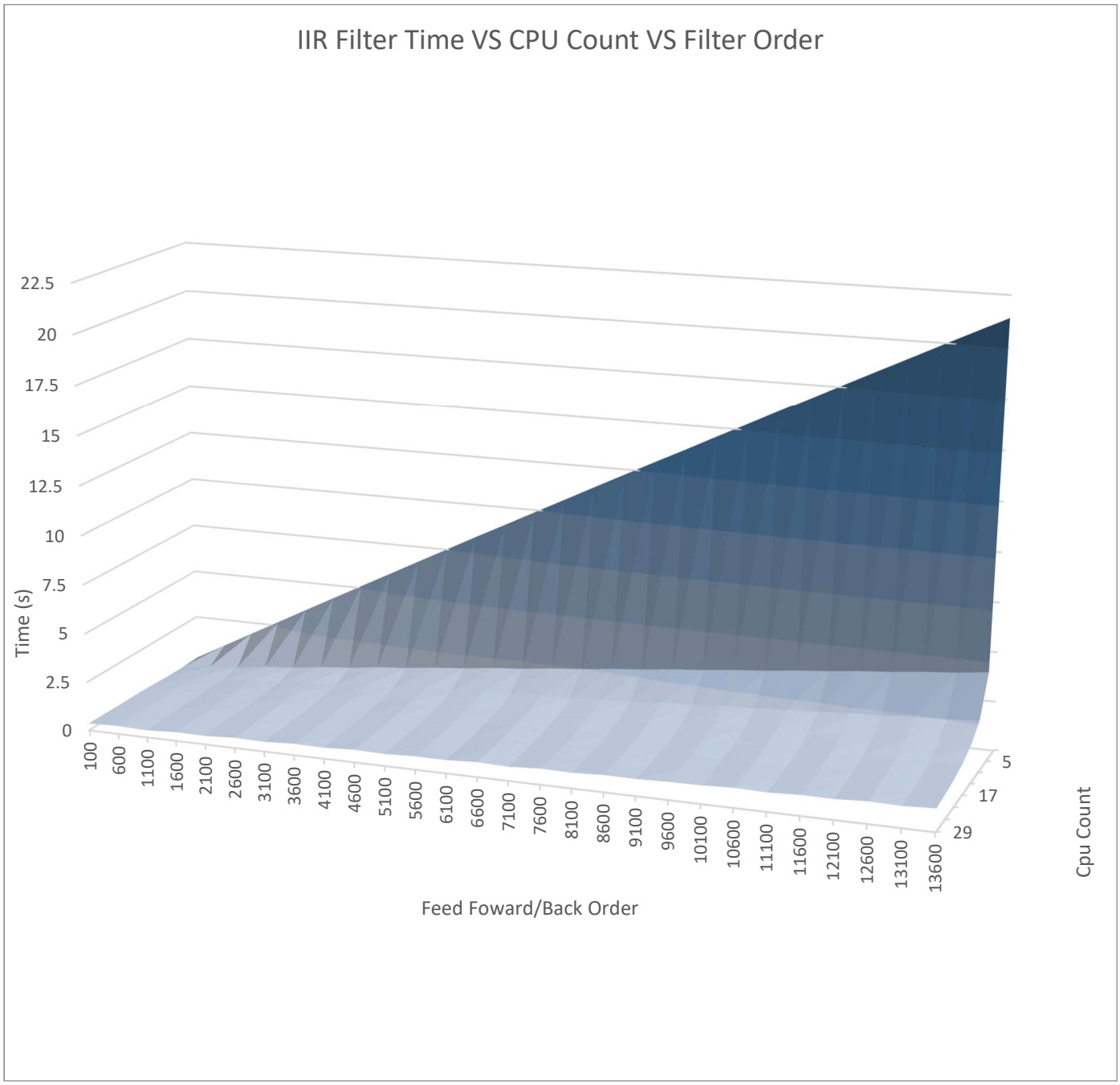


You're probably going to hate on the 3D chart, but I think it paints a good picture…

My chart shows the relationship between Length and CPU count VS time. We see that at low core counts, increasing FIR Length had a drastic decrease in performance. On the other hand, Increasing FIR length had almost no impact on performance on higher core counts. I saw a 2x increase in time when going from FIR len 1000->15000 on 30 cores, while I saw a 11x increase in time on a single core.



In my IIR filter I see a similar trend. On larger filter sizes, higher core counts are able to scale more efficiently, than lower core counts. One interesting thing to note, is that at low filter orders, low core counts actually preforms better than higher core counts. I am guessing this is because of the overhead required in creating assigning tasks to each core. I saw a 3.25 increase in time for a core count of 29, and a 82 times increase on a single core.