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Final Part 1 Reading – QUIC

When I read this article, I read it how you would normally. After a page or two, I would skim ahead to see if there are any visuals because this is one of the most detailed scholarly article I have ever read. What I like about this article is that this new protocol in a sense is open source and it strives for improvement rather than other protocols being enabled and no one able to improve upon them. The improvements that I liked and stood out too me were these three statements "*QUIC's performance gains are diminished on phones due to its reliance on application-layer packet processing and encryption.",* "*QUIC outperforms TCP in scenarios with fluctuating bandwidth. This is because QUIC's Acknowledgment (ACK) implementation eliminates ACK ambiguity, resulting in more precise RTT and bandwidth estimations*.", and "*An essential property of transport-layer protocols is that they do not consume more than their fair share of bottleneck bandwidth resources.".* These statements clearly illustrate the pros and cons of this protocol and can show where to turn a con into a pro.

I am curious to see if the Institute of Electrical and Electronics Engineers would make this QUIC protocol a standard in the near future because they are the go to group for computer science, electrical engineering, etc. industry standard. What I found challenging in this article was the extensive amount of technical jargon. Sometimes I would have to reread a sentence or two, look up some terms, or relook at some of my class notes so I do not get lost in the reading. As a result, it was very difficult The visuals in this article were a big help because not only it "visually" supports the text but the graph style and implantation is similar, if not the same as my data science class that I took here at CSUMB. What I like about this new protocol is that it has potential to make the internet experience better. Everyone in any profession strives for improvement and this is article along with this protocol is a prime example of making the latest and greatest iteration of internet protocols. I am excited when I am older because I will compare and contrast the technological achievement's the human race has made.

There were numerous topics and terminology that I found in this article that was covered in class. Those topics and terminology were transmission control protocol, round-trip delay, hypertext transfer protocol, congestion, packet delivery, and encryption. What I am curious about this protocol is that will it be controlled and licensed by Google only? Google within themselves tracks all of its clients, so who is to say that this protocol will be a further enhancement of tracking its clients. I couldn't find elsewhere in the article but it does seem that it is still in Google's environment. The surprise that I took from this article was the "lessons learned" section. I really like how it is structured and easy to understand. More specifically I enjoyed this section "*Plan for change. As the Internet evolves, so too will transport protocols: It is essential to develop evaluation techniques that adapt easily to such changes to provide consistent and fair comparisons over time.".* I feel that this is a very important mindset to have because if you want to create a technology that everyone is going to use, you need to think of the future and have the technology create some sort of legacy.