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CS 740

“Analysis and Simulation of a Fair Queueing Algorithm” Reaction

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The paper “Analysis and Simulation of a Fair Queueing Algorithm” examines a new strategy for routers. Instead of the First-Come-First-Serve nature of today’s current routers, they propose that each source-destination pair passing through a router should have its own queue, and each source should get a fair slice of the router’s bandwidth. This would be done in a round-robin fashion, where they weight the size and frequency of packets to make sure that no source uses more than its fair share of bandwidth. They hope that this will eliminate threats from ill-behaved hosts by limiting their bandwidth so they only get a fair-share.

In my opinion, this paper has no merit. They don’t even address how a router could possibly have enough queues for every source-destination pair passing through them at any time. And they don’t discuss how a router could possibly know, keep track of, and quickly process all this information without the internet grinding to a screeching halt. While it’s an interesting theoretical exercise, it’s more of a math paper than anything that could ever be applied.

From a clean slate perspective, I also believe that this paper does not offer any ideas that could be used. As stated in the previous paragraph, it’s just not technologically feasible. With the quantity of users on the internet, and with each user having the ability to create more than one source-destination pair, there are just far too many queues required in each router to do any sort of quick processing.