CSE 534 Assignment II: Part D

Mallesham Dasari

Congestion Avoidance:

From the Fig. 1, it can be observed that Additive Increase Multiplicative Decrease (AIMD) is the only algorithm which converges on the long run. Fig. 1(a), shows that, in Multiplicative Increase Additive Decrease (MIAD), the point that which is decreased additively, is increased multiplicatively which goes always in the opposite direction of fairness line. From Fig. 1(b), Multiplicative Increase Multiplicative Decrease (MIMD) oscillates to and fro along the same points and never goes towards fairness line. The same scenario is observed in the case of Additive Increase Additive Decrease (AIAD), where the increase and decrease is done additively. Finally, in AIMD, the two users can come to an agreement as shown in Fig. 1(b) and converges to fairness line. They do so by moving additively along at an angle of 45 degrees. This brings them close to fairness line.

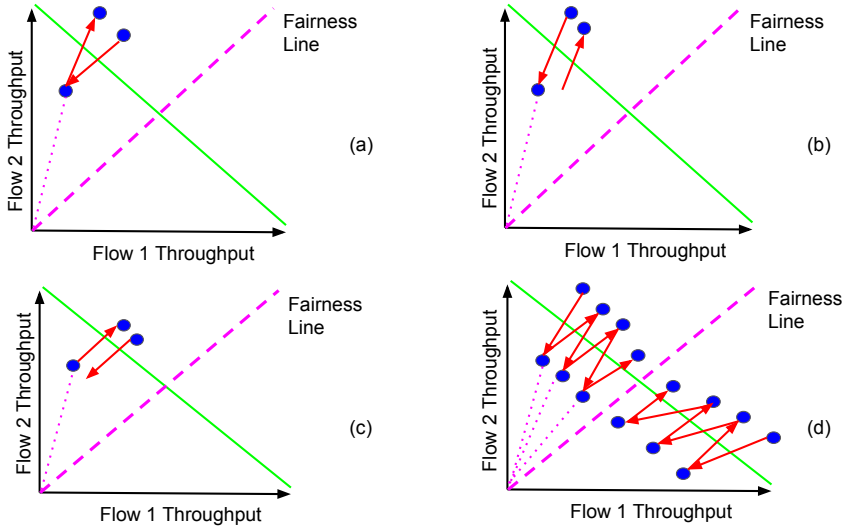

Figure 1: Analysis of Increase Decrease Algorithms for TCP Congestion Avoidance: (a) MIAD, (b) MIMD, (c) AIAD, (d) AIMD