In comparison, CARA-1 achieves significantly higher, about 11.5 times (on average), aggregated system throughput than AARF in this simulation setup. It is because CARA can deal with collisions much better. Throughput in AARF drops so quickly because AARF is unable to identify the reason of transmission fail, which leads to rate decreasing over-aggressively [2]. Secondly, since each station conducts its rate adaption indecently, such transmission-rate diversity will cause the *performance anomaly.*

But AARF is better than CARA at first point, it is because that with 1 node, there is no collision, at this situation, CARA is equal to ARF. And according to [1], AARF has a better performance that ARF.

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