This paper extends XCP to run over multi-access links, e.g., wireless links. The XCP control equation requires the router to estimate the available bandwidth on its output link. This quantity is easy to compute for point-to-point links, where it is set to the difference between the link’s capacity and the traffic the router sends on it. The computation becomes tricky for multi-access links, where the available bandwidth depends on the aggregate traffic sent by all nodes connected to the multi-access link. The authors propose a scheme that uses the queue size and draining properties to estimate the available bandwidth on a multi-access link.

The paper does a nice job in providing a first step toward running XCP on multi-access links. The design decisions are well-justified and the authors provide simulation results showing that the modified XCP outperforms current TCP on wireless links. The modified protocol however requires a few parameters. The paper does not elaborate on the sensitivity of the design to parameter tuning. Overall, this is a nice start on addressing the issue of XCP over multi-access links.

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