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Errata Slip

In the paper "Exploiting a Natural Network Effect for Scalable, Fine-grained Clock Synchronization" by Yilong Geng, Shiyu Liu, and Zi Yin, *Stanford University;* Ashish Naik, *Google Inc.;* Balaji Prabhakar and Mendel Rosenblum, *Stanford University;* Amin Vahdat, *Google Inc.* (Monday session, "Distributed Systems," pp. 81–94 of the Proceedings), the authors wish to correct the following:

Introduction, 2nd paragraph:

Original text:
Our work is motivated by several compelling new applications and the possibility of obtaining very fine-grained clock sychronization at an accuracy and cost that is much less than provided by current solutions.

Corrected text:
Our work is motivated by several compelling new applications and the possibility of obtaining very fine-grained clock synchronization at an accuracy that is much higher and a cost that is much lower than provided by current solutions.

In the paper "Copa: Practical Delay-Based Congestion Control for the Internet" by Venkat Arun and Hari Balakrishnan, *MIT CSAIL* (Tuesday session, "Congestion Control," pp. 329–342 of the Proceedings), the authors note the following:

In two of our experiments (in sections §5.1 and §5.6), there was a bug in how we ran BBR. It resulted in improper pacing of packets. The correct results are as follows. These experiments use the Mahimahi network emulator.

Section §5.1 The new results are shown in Figures 1 and 2 below. Copa still outperforms prior schemes on fairness index.
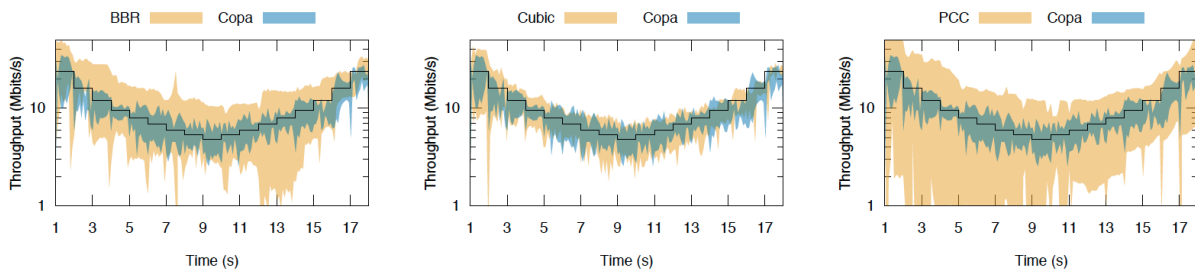

Figure 1: Mean ± std. deviation of the rates of 10 ows as they enter and leave an emulated network once a second. The black line indicates the ideal fair allocation. Graphs for BBR, Cubic, and PCC are shown alongside Copa in each gure for comparison.
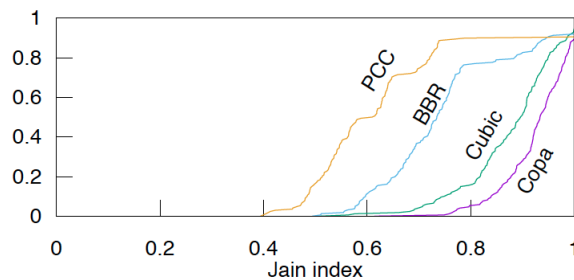

Figure 2: A CDF of the Jain indices (higher the better) obtained at various timeslots for the dynamic behavior experiment (x5.1). Copa achieves the highest median Jain fairness index of 0.93 while Cubic, BBR and PCC achieve median indices of 0.90, 0.73 and 0.60 respectively.

Section §5.6 For our emulated satellite link, the x-axis in Figure 9 shows the median queuing delay, not the mean. After we xed our bug, BBR's median delay came down to 2 ms from 112 ms. Throughput remained the same.