

In this paper, we present a scheduler that incorporates round robin service within a VirtualClock discipline. Time-stamp based scheduling algorithms attain a low local delay bound and performance guarantee, but are computationally complex. On the other hand, round robin schemes are simple to implement and have computational complexity of  $O(1)$ , but they are well known for their output burstiness and short-term unfairness. In order to overcome this problem, we combine round robin with VirtualClock in an algorithm we call VCRR. VCRR possesses better fairness than simple round robin, low jitter and a good scheduling delay bound. At the same time, VCRR preserves the  $O(1)$  time complexity of round robin. Simulation experiments show VCRR's efficiency in terms of delay performance, jitter and fairness.