

## Packet-switching with little or no buffers

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**Abstract** *All-optical networks are a pipedream, so said the networking community. An Internet router needs big buffers to hold packets during times of congestion (conventional wisdom said we needed to buffer a million packets for a 10Gb/s link) and there is no way you can build optical buffers that big. QED. It turns out the conventional wisdom was wrong: Reduce the buffering by two orders of magnitude, and both delay and jitter go down. The user is better off, and the operator doesn't lose any throughput. Nowadays, backbone traffic is so aggregated and smooth that you could reduce buffers to just a few dozen packets. Does this mean we could deploy all-optical routers after all?*

No paper available