Faculty of Computer Science 2002-2003 Seminar Series

Measuring Traffic at the Core of the Internet By

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Refreshments will be served at 3:20 p.m. A router at the core of the Internet operates at such high speeds that it must process a packet in eight nanoseconds. This makes gathering of statistics a difficult task. For one, there is not sufficient time to access RAM on a frequent basis, and the total computation per packet is severely limited. At the same time billing and routing decisions are predicated on knowledge of the nature of traffic at each point in the network.

We present a method to identify the most used elements in an Internet traffic flow, and discuss practical applications in real life. This is joint work with E. Demaine and Ian Munro.