Course: Computer and Communication Networks

Topic: Data Traffic

Presentation by

Ajay Kakkar

Assistant Professor

Department of Electronics and Communication Engineering,

Thapar Institute of Engineering & Technology
(Deemed to be University)
Bhadson Road, Patiala, Punjab, Pin-147004
Contact No. : +91-175-2393201
Email : info@thapar.edu

THAPAR INSTITUTE
OF ENGINEERING & TECHNOLOGY
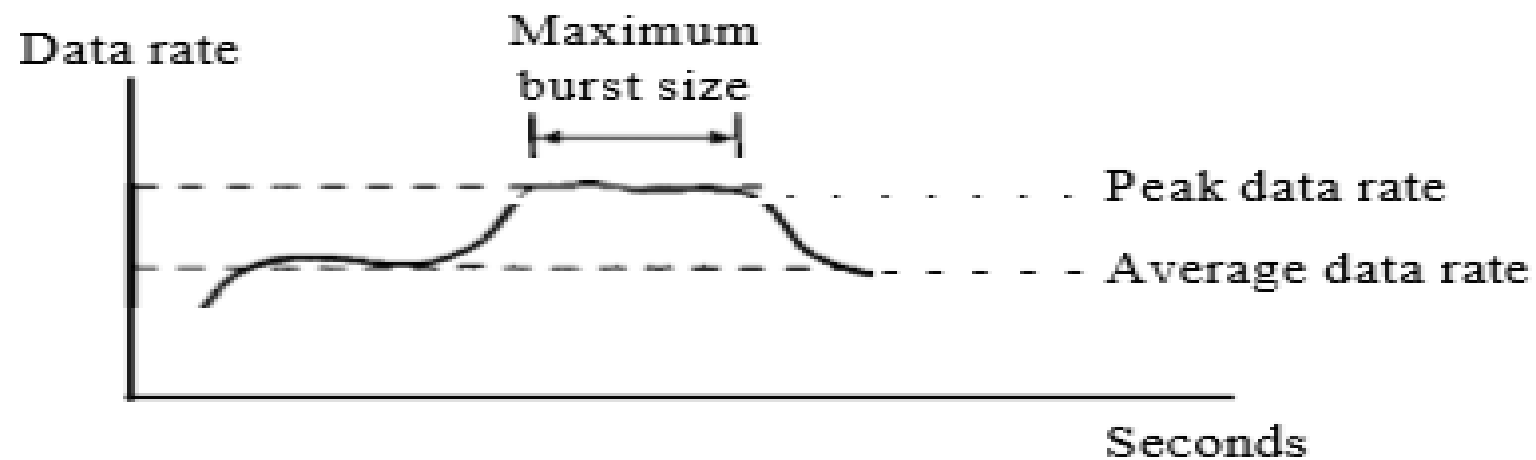(Deemed to be University)

DATA TRAFFIC

Traffic Descriptor

- Average Data Rate

- Peak Data Rate

- Maximum Burst Size

- Effective Bandwidth

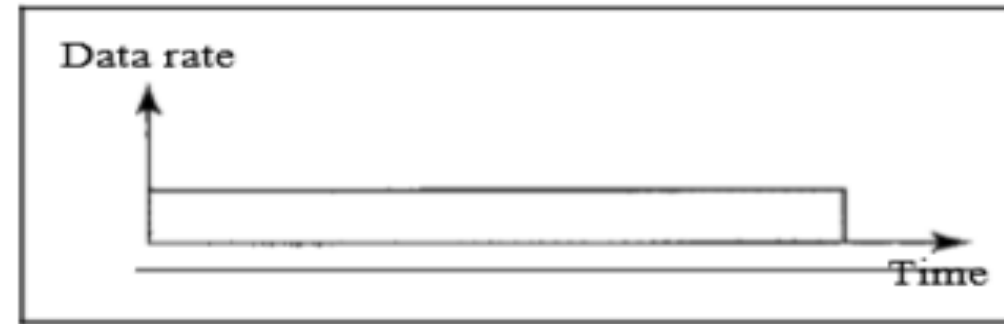$$\text{Average data rate} = \frac{\text{amount of data}}{\text{time}}$$

Reference: 1. Ferouzan, Behrouz A., Data Communications and Networking, 2. Stallings William, Data and Computer Communication. 3. https://ieeexplore.ieee.org
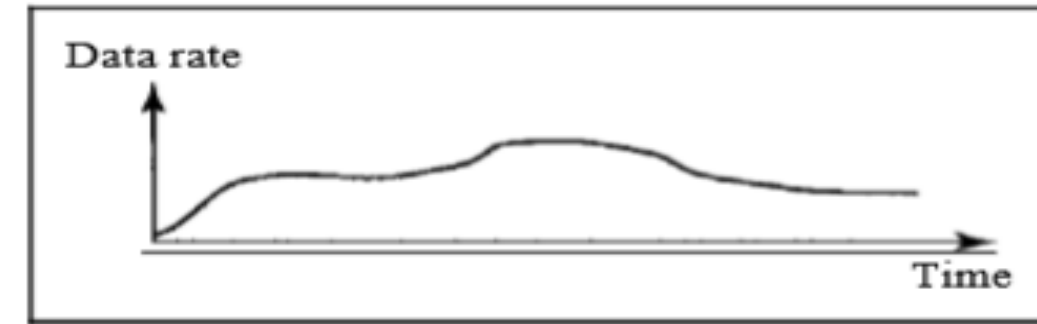
DATA TRAFFIC

Traffic Profiles

Constant Bit Rate
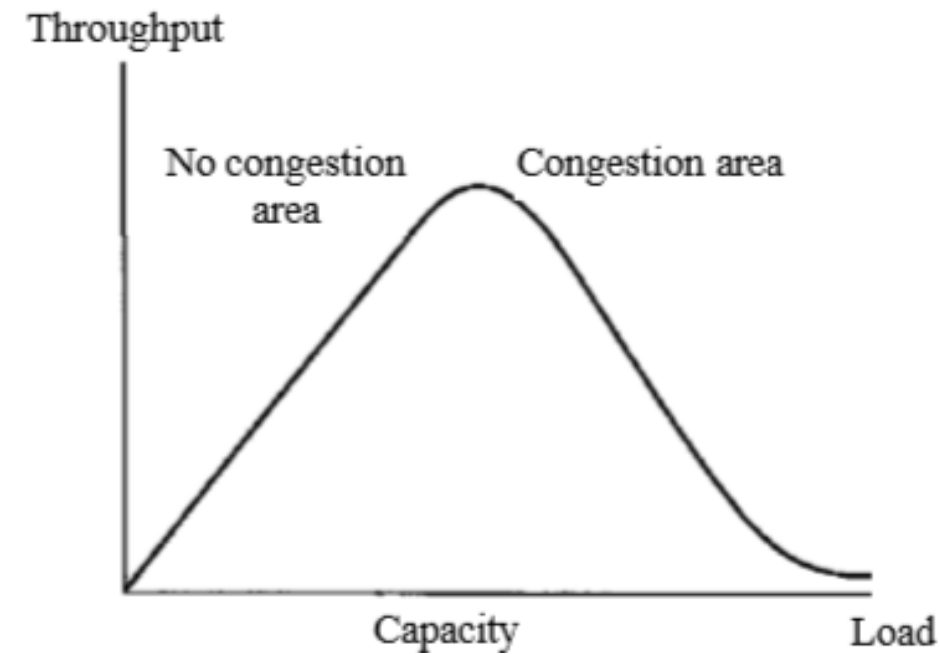
Variable Bit Rate
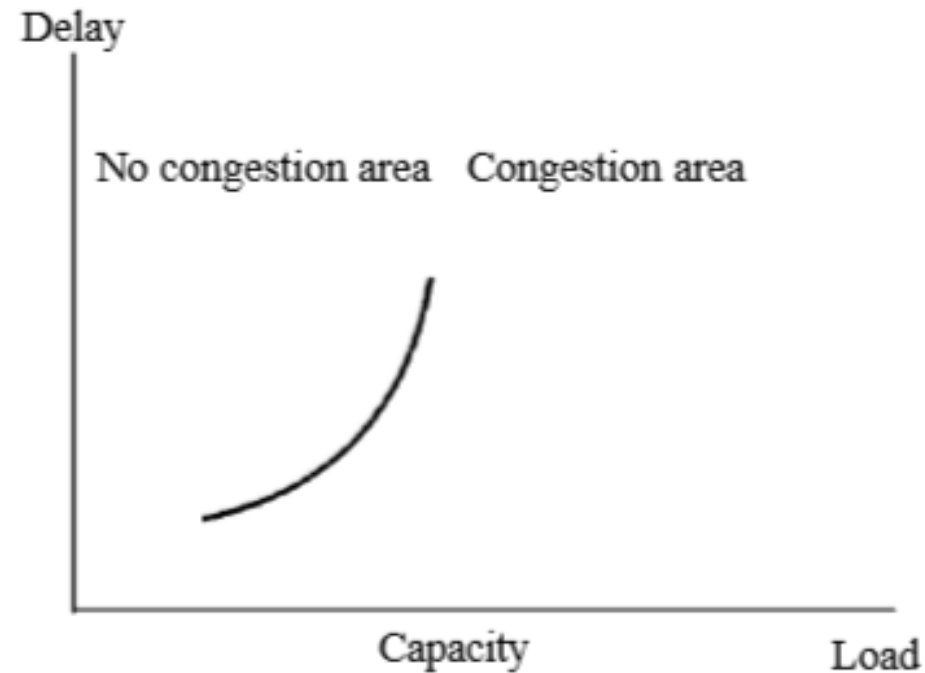
Bursty data

a. Constant bit rate

b. Variable bit rate

c. Bursty

Reference: 1. Ferouzan, Behrouz A., Data Communications and Networking, 2. Stallings William, Data and Computer Communication. 3. https://ieeexplore.ieee.org

Network Performance

Delay graph: No congestion area | Congestion area — Delay vs Load, with Capacity marked on Load axis.

Throughput graph: No congestion area | Congestion area — Throughput vs Load, with Capacity marked on Load axis.
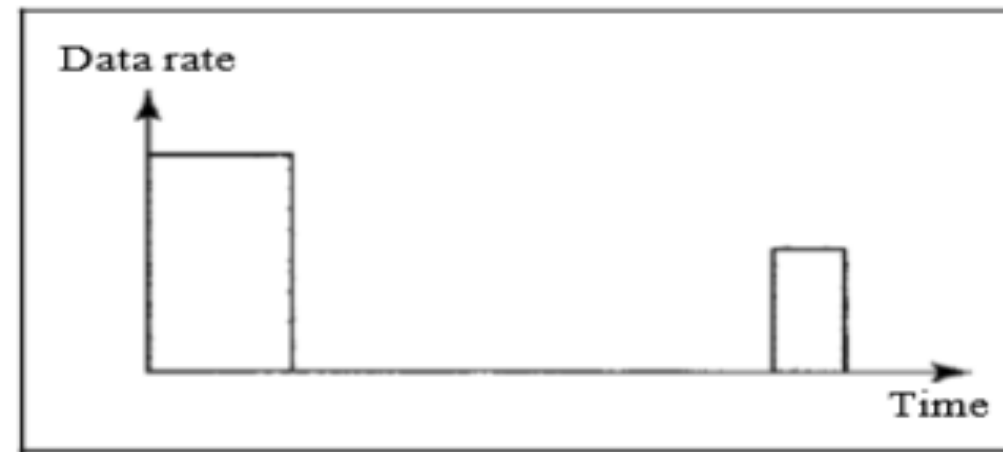
Congestion control involves two factors that measure the performance of a network:
Delay and Throughput.

Reference: 1. Ferouzan, Behrouz A., Data Communications and Networking, 2. Stallings William, Data and Computer Communication. 3. https://ieeexplore.ieee.org