Module-1: Data Communication Components - 1

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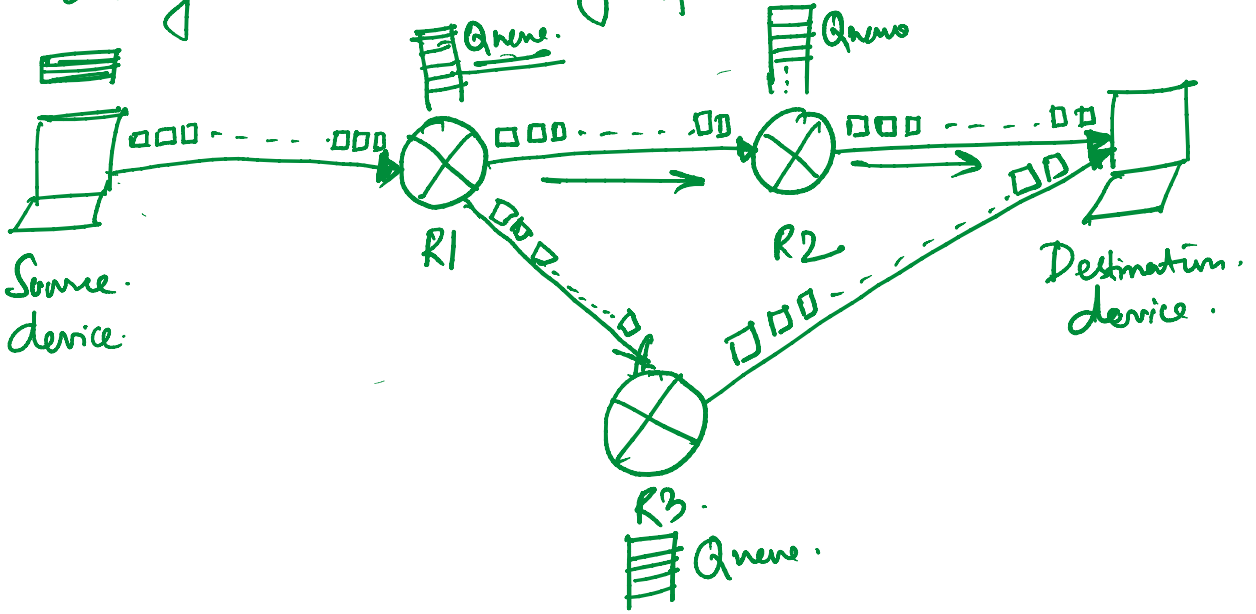
Four Fundamental Characteristics of Data Communication :—

1. **Delivery** — data must be delivered in the correct destination.

2. **Accuracy** — the system must deliver data accurately — data is altered in transmission and left uncorrected, then it becomes unusable.

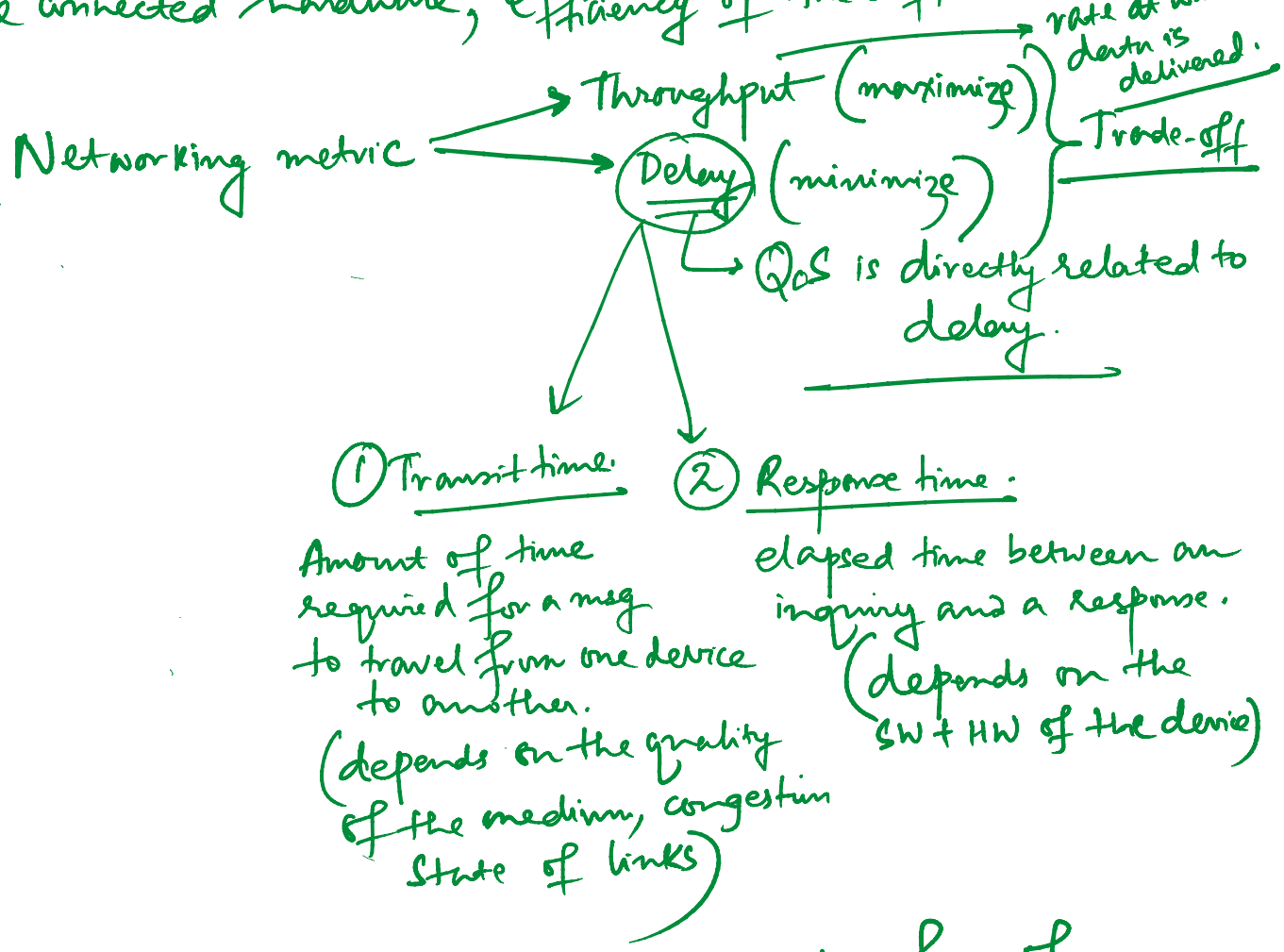
3. **Timeliness** — The system must deliver data in a timely manner — in the same order in which the data is produced without significant delay (real-time delivery).

4. **Jitter** — Variations in packet arrival time — uneven delay in the delivery of multimedia data.



Network Criteria

(1) **Performance** – depends on a number of factors — no. of users/requests, types of transmission medium, the capabilities of the connected hardware, efficiency of the software.



(2) **Reliability**: network's robustness in the face of component failures — frequency of the failure, the time it takes a link to recover from a failure—

(3) **Security**: protecting data from unauthorized access, protecting data from damage and development, implementing

protecting data from damage and development, implementing policies and procedures for recovery from breaches, data losses, etc.

Network: A network is a two or more devices connected through links. A link is a communication pathway that transfers data from one device to another. For communication to occur, two devices must be connected in some way to the same link at the same time.

Physical Structure of a network:
- type of connection
- physical topology