



EC 554
Data Communications

Mohamed Khedr

www.aast.edu/~khedr

Grades

Load	Percentage	Date
7 th Week Exam	15%	4 Nov 2007
12 th Week Exam	15%	4 December 2007
Final Exam	40%	
Participation	15%	
Report	15%	13 th week and up

Syllabus

- Tentatively

Week 1	Overview
Week 2	Data Transmission
Week 3	Signal encoding techniques
Week 4	Error Detection
Week 5	Error correction
Week 6	Flow Control
Week 7	Error control
Week 8	HDLC
Week 9	Multiplexing
Week 10	Spread spectrum
Week 11	Wireless channel characteristics
Week 12	OFDM
Week 13	Packet switching
Week 14	Routing
Week 15	Revision

Figure 1.1 *Five components of data communication*

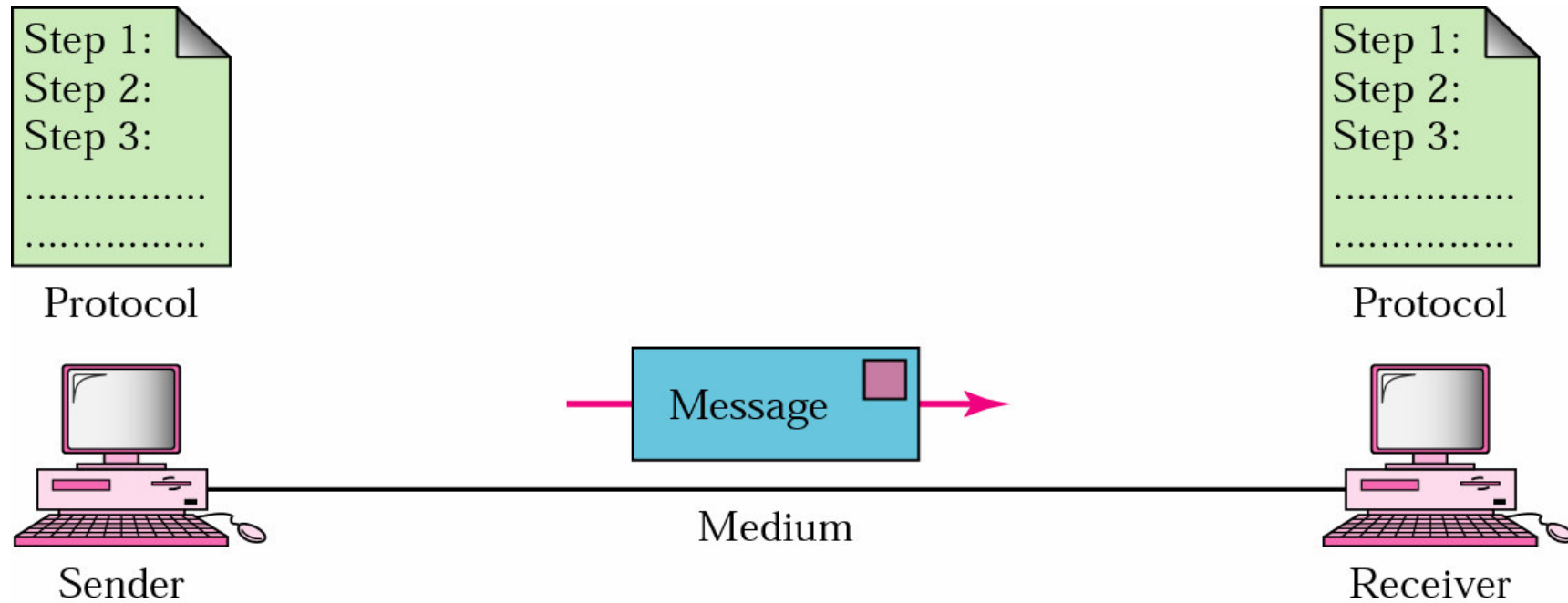


Figure 1.2 *Simplex*

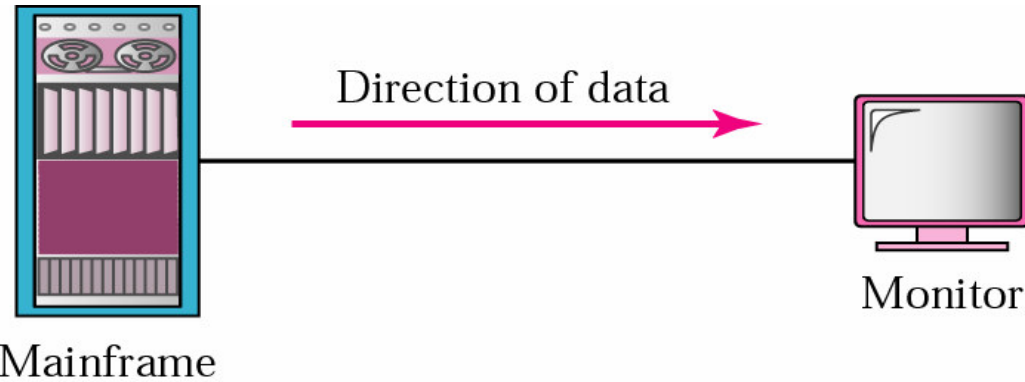


Figure 1.3 *Half-duplex*

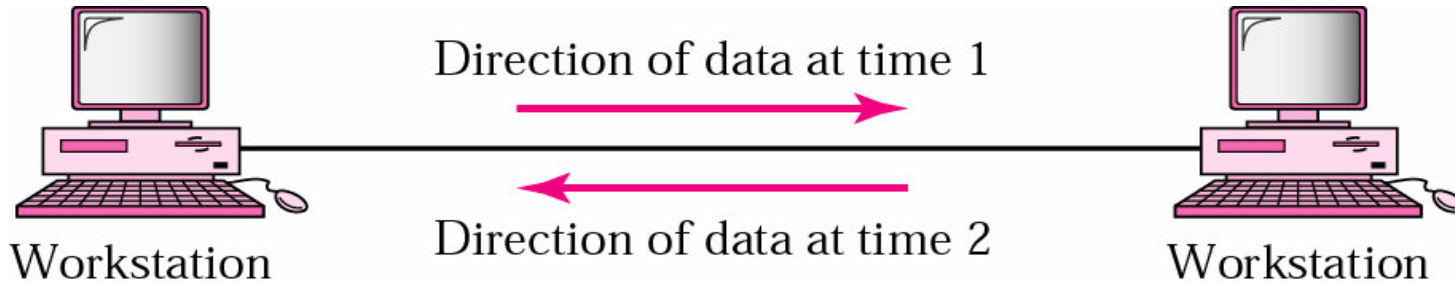


Figure 1.4 *Full-duplex*

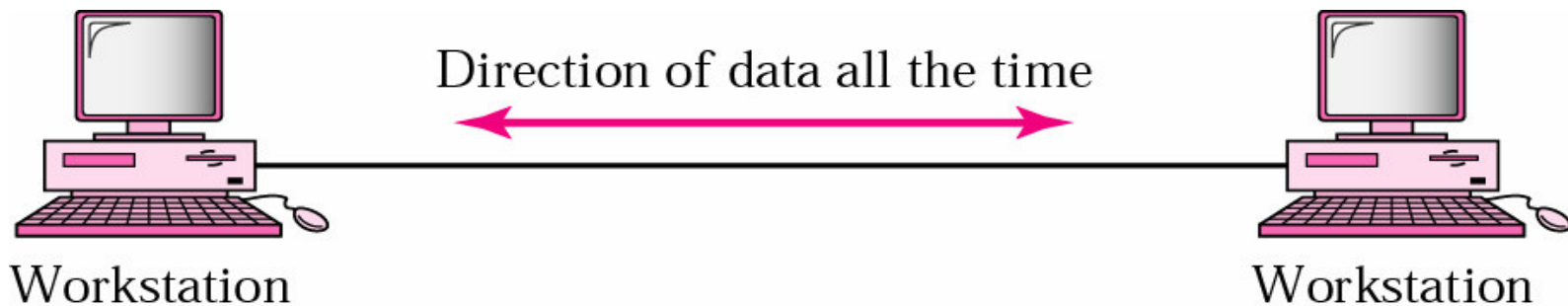


Figure 1.5 *Point-to-point connection*

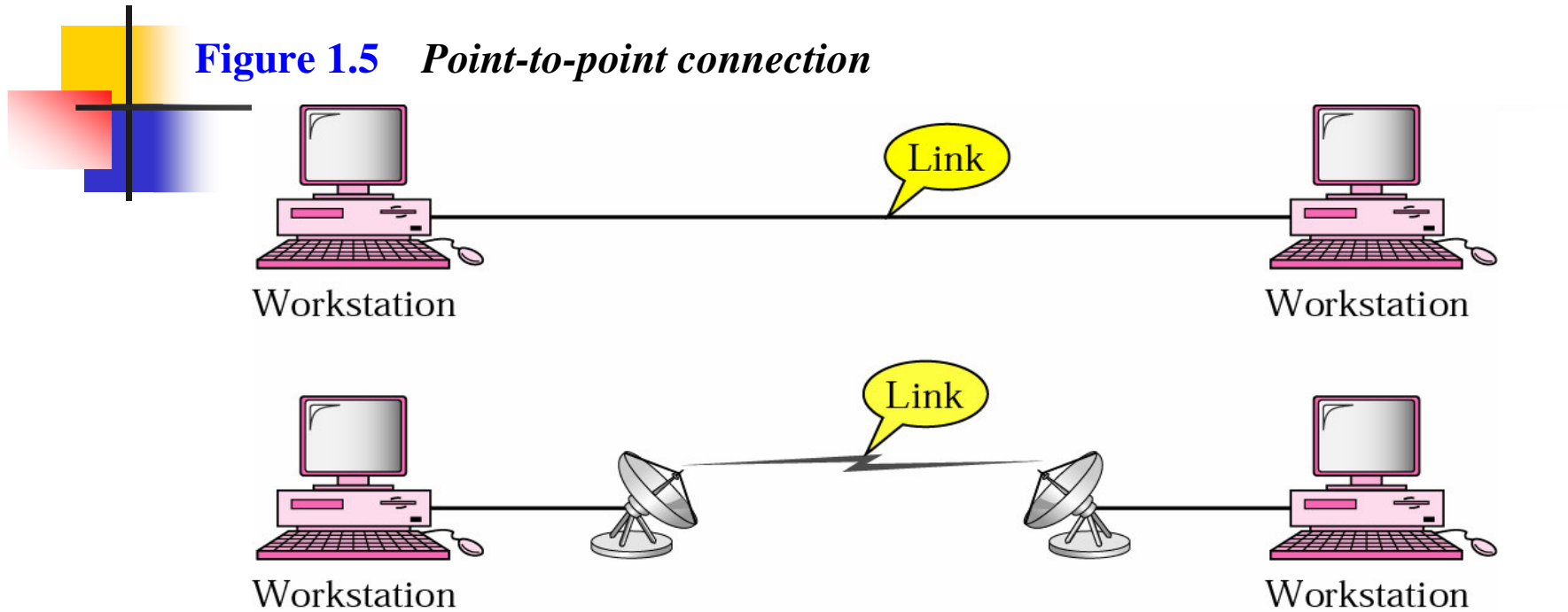


Figure 1.6 *Multipoint connection*

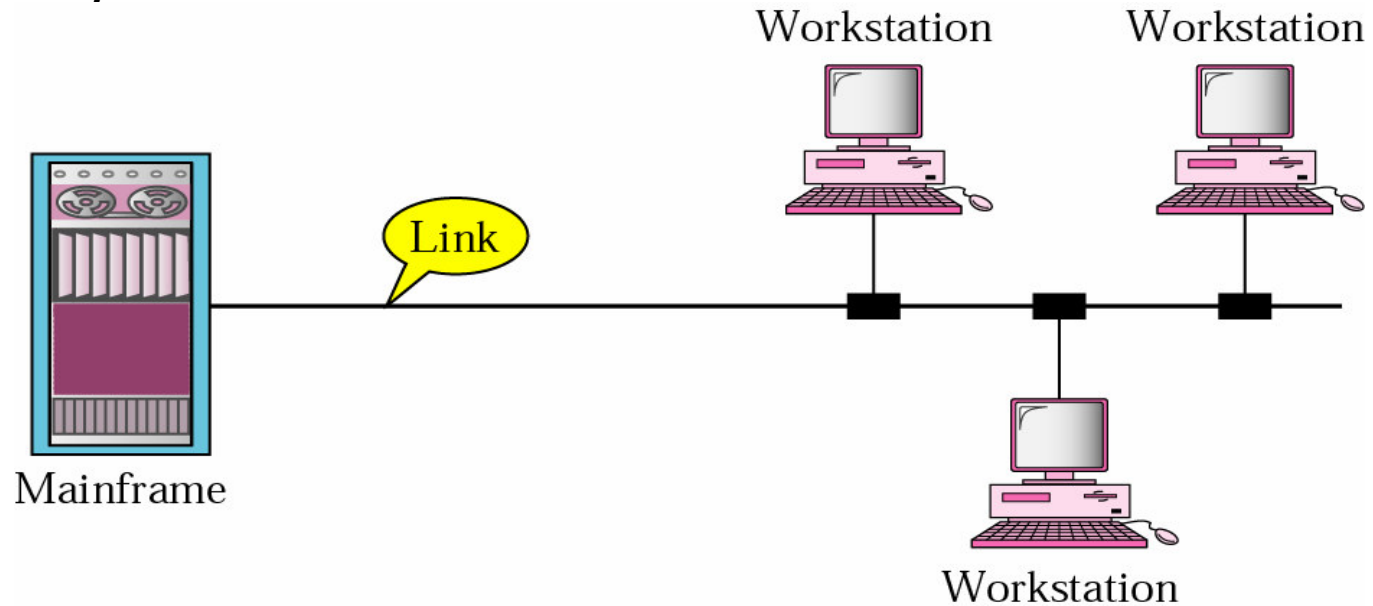


Figure 1.7 *Categories of topology*

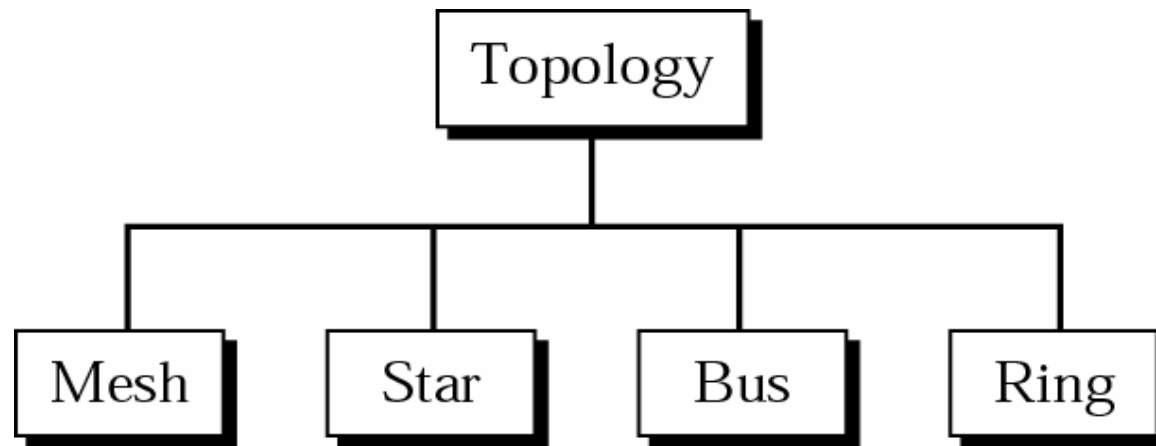


Figure 1.8 *Fully connected mesh topology (for five devices)*

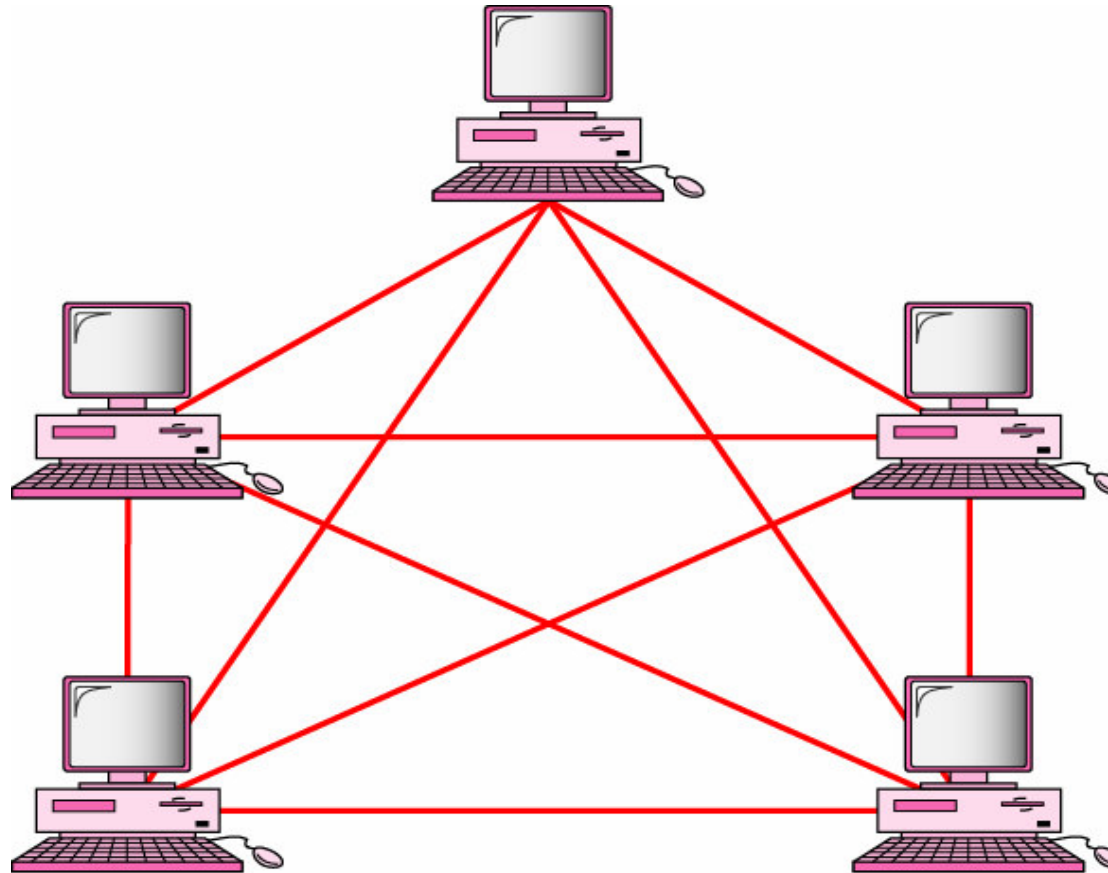


Figure 1.9 *Star topology*

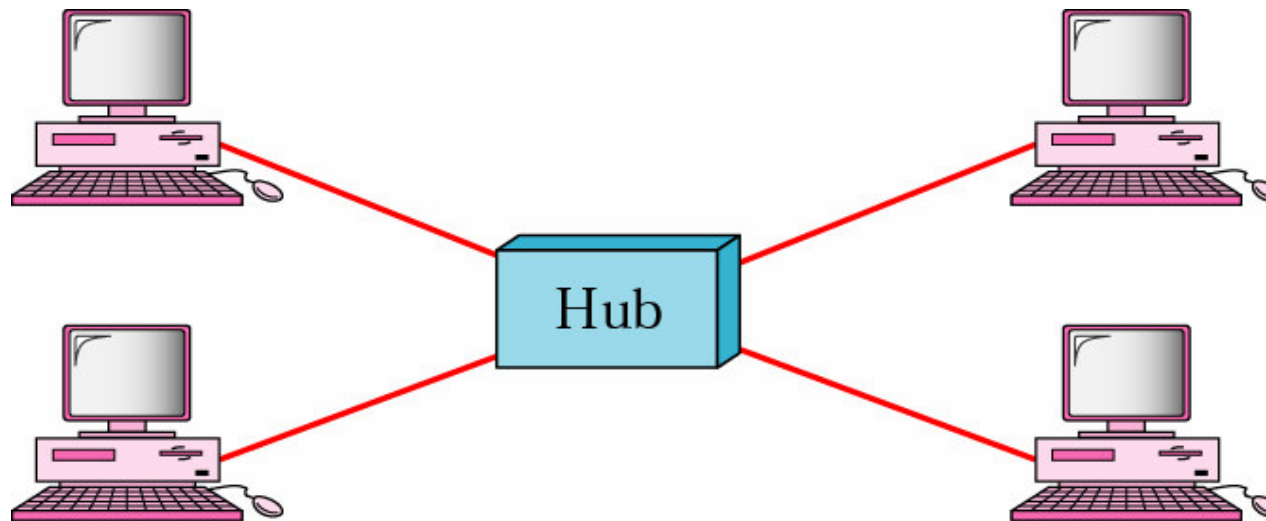


Figure 1.10 *Bus topology*

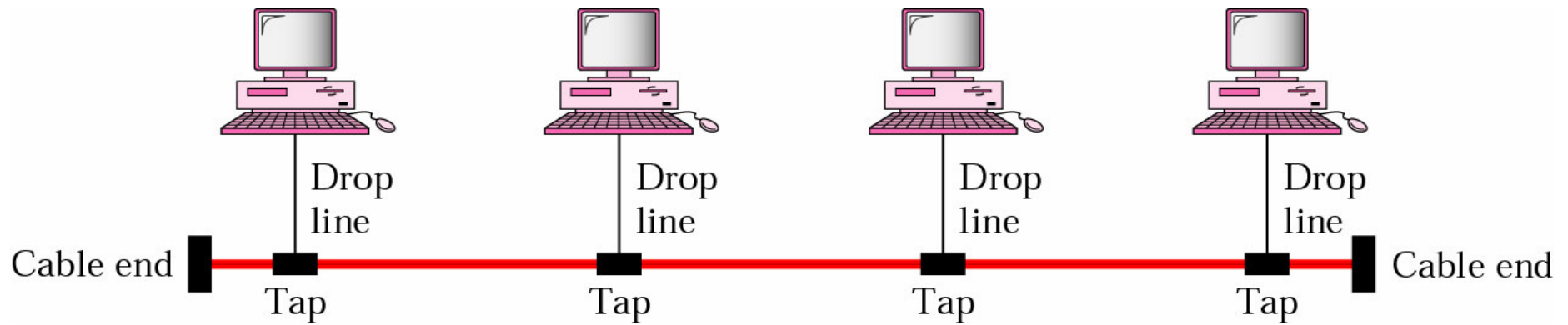


Figure 1.11 *Ring topology*

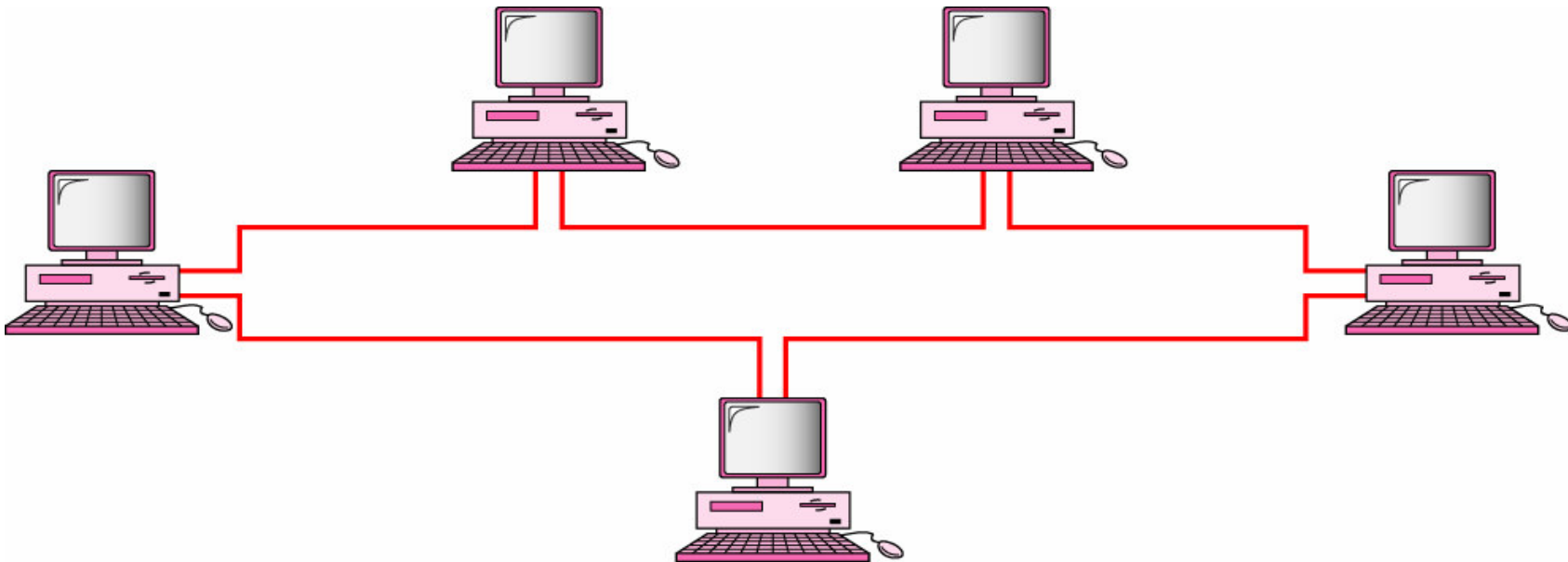


Figure 1.12 *Categories of networks*

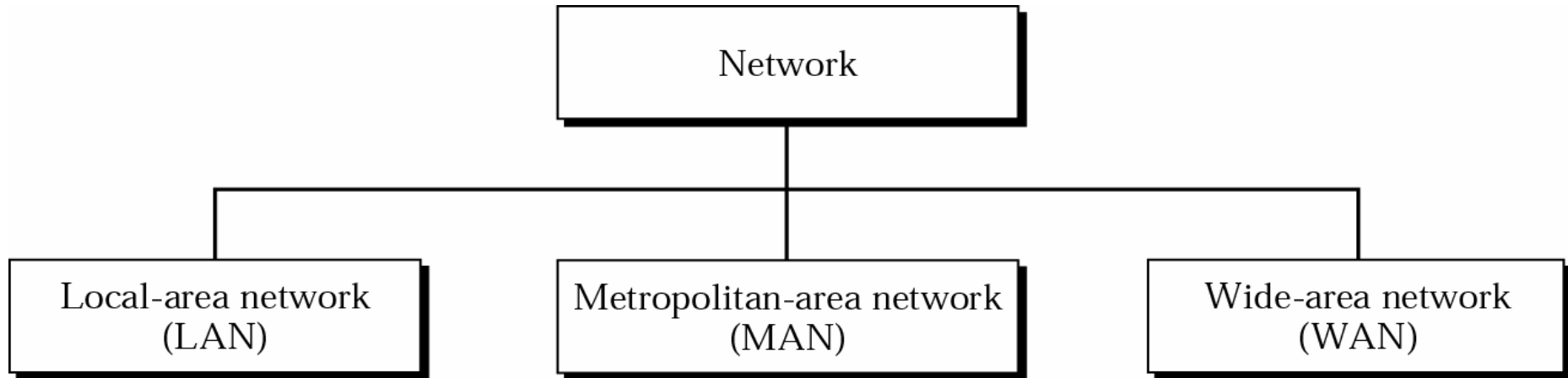
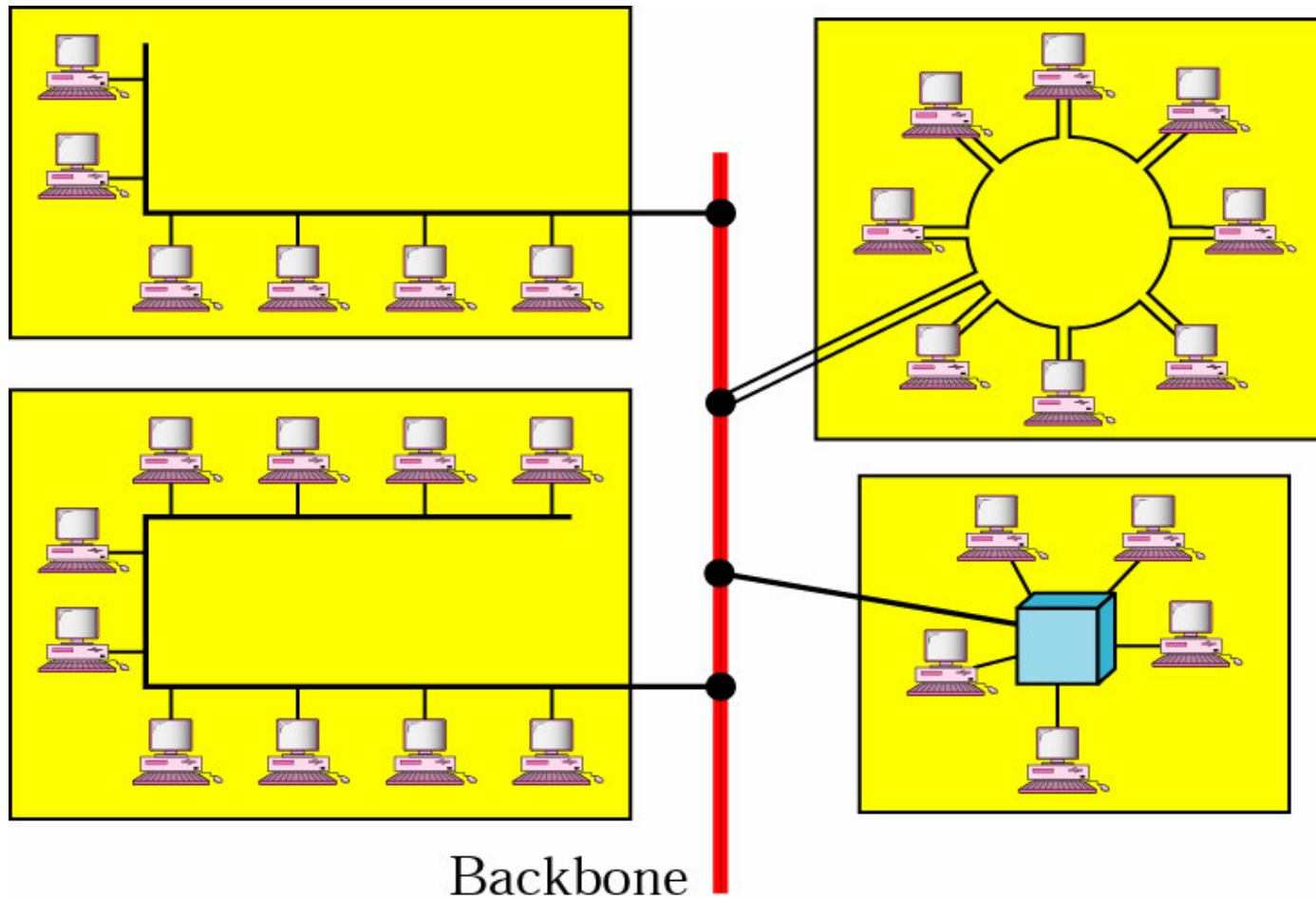


Figure 1.13 LAN



b. Multiple-building LAN

Figure 1.14 *MAN*

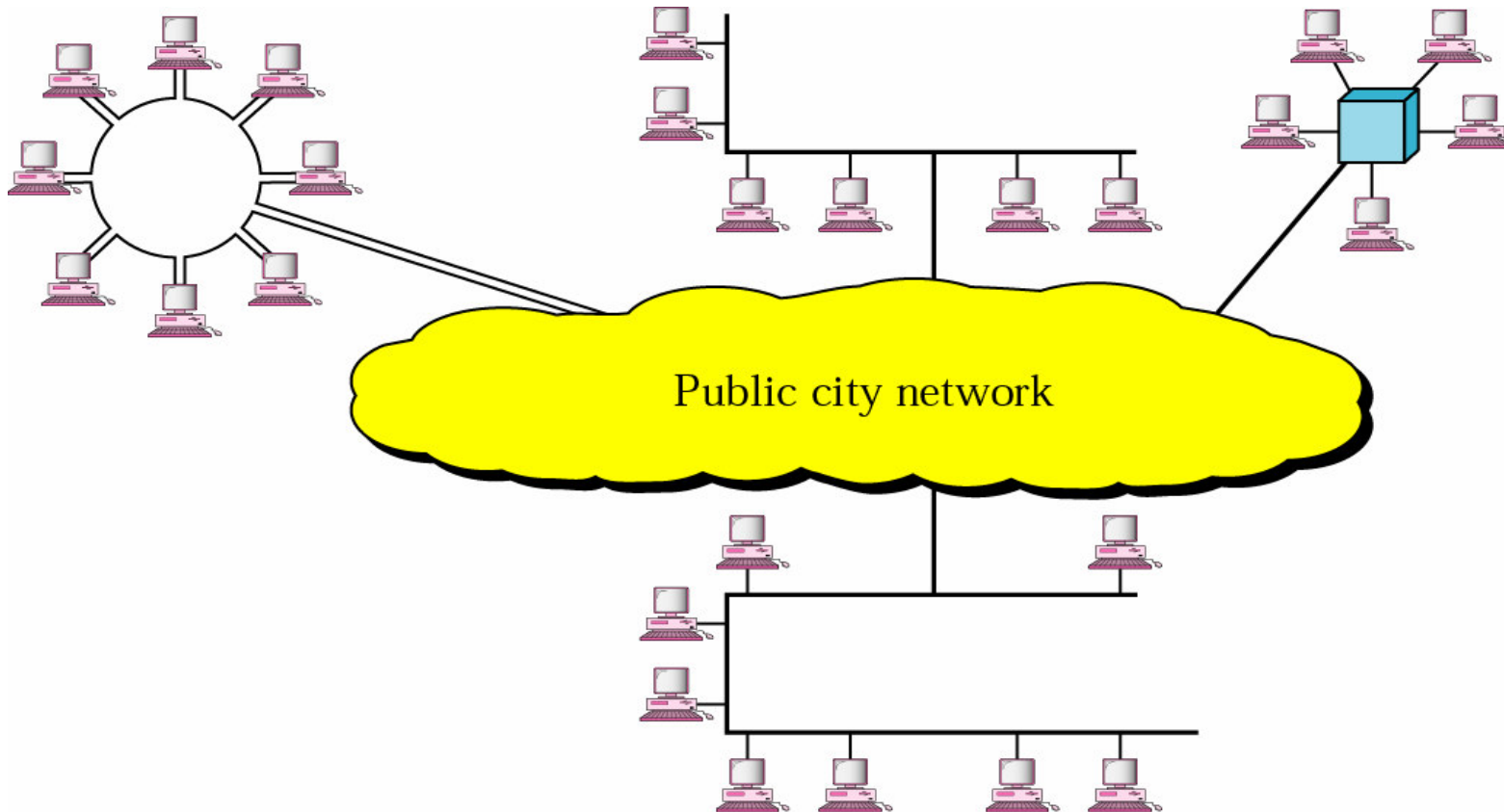


Figure 1.15 WAN

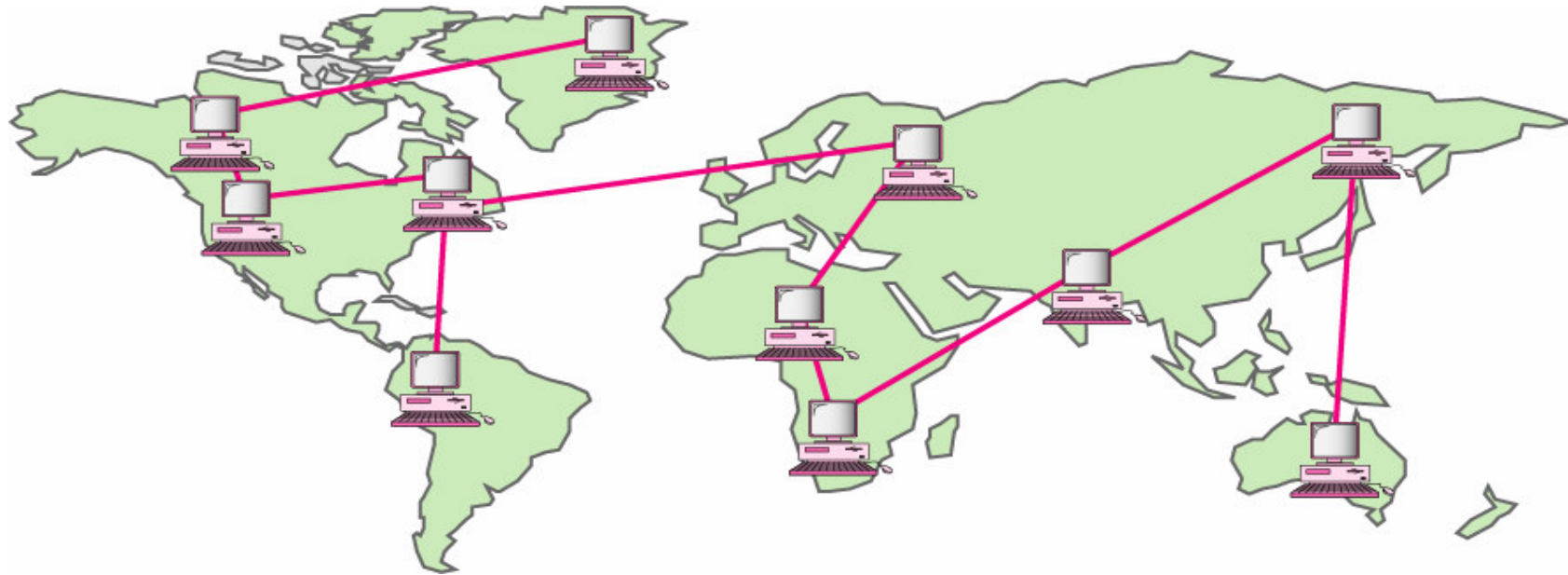


Figure 2.1 Protocols *Sending a letter*

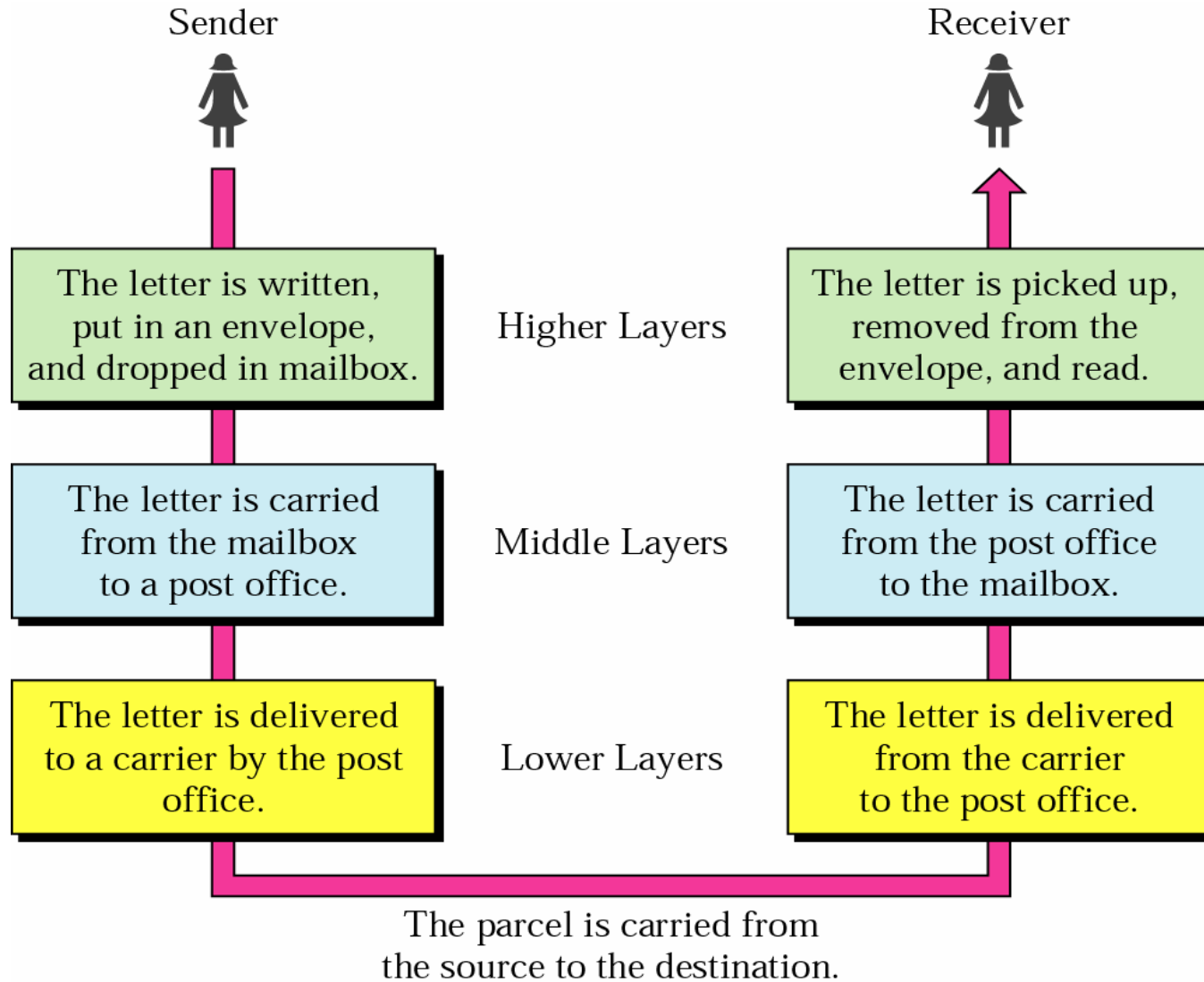


Figure 2.16 *Summary of duties*

