

TCP/IP Protocol Suite

Outline

2.3 TCP/IP Protocol Suite

2.4 Addressing

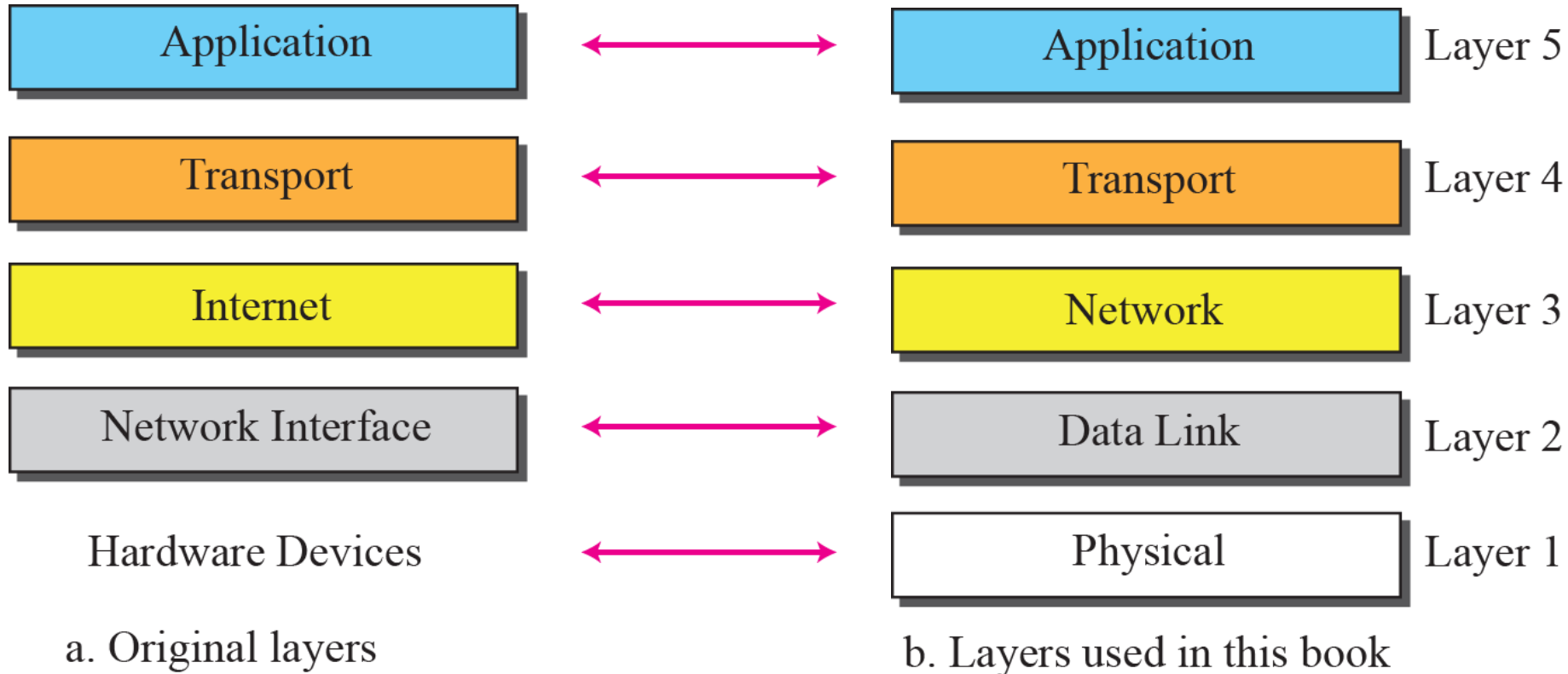
TCP/IP PROTOCOL SUITE

The TCP/IP protocol suite was developed prior to the OSI model. Therefore, the layers in the TCP/IP protocol suite do not match exactly with those in the OSI model. The original TCP/IP protocol suite was defined as four software layers built upon the hardware. Today, however, TCP/IP is thought of as a five-layer model with the layers named similarly to the ones in the OSI model. Figure 2.7 shows both configurations.

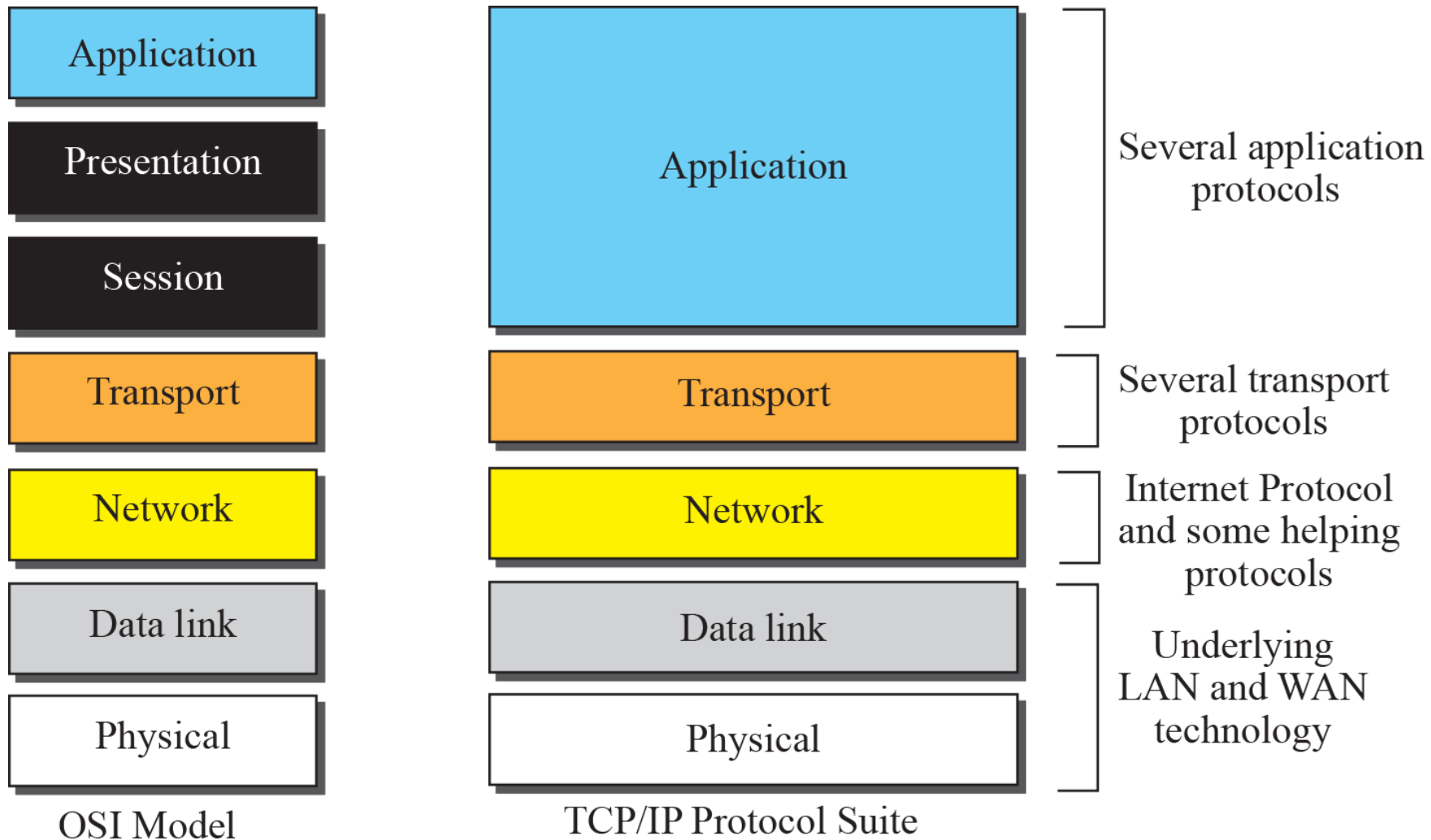
Topics Discussed in the Section

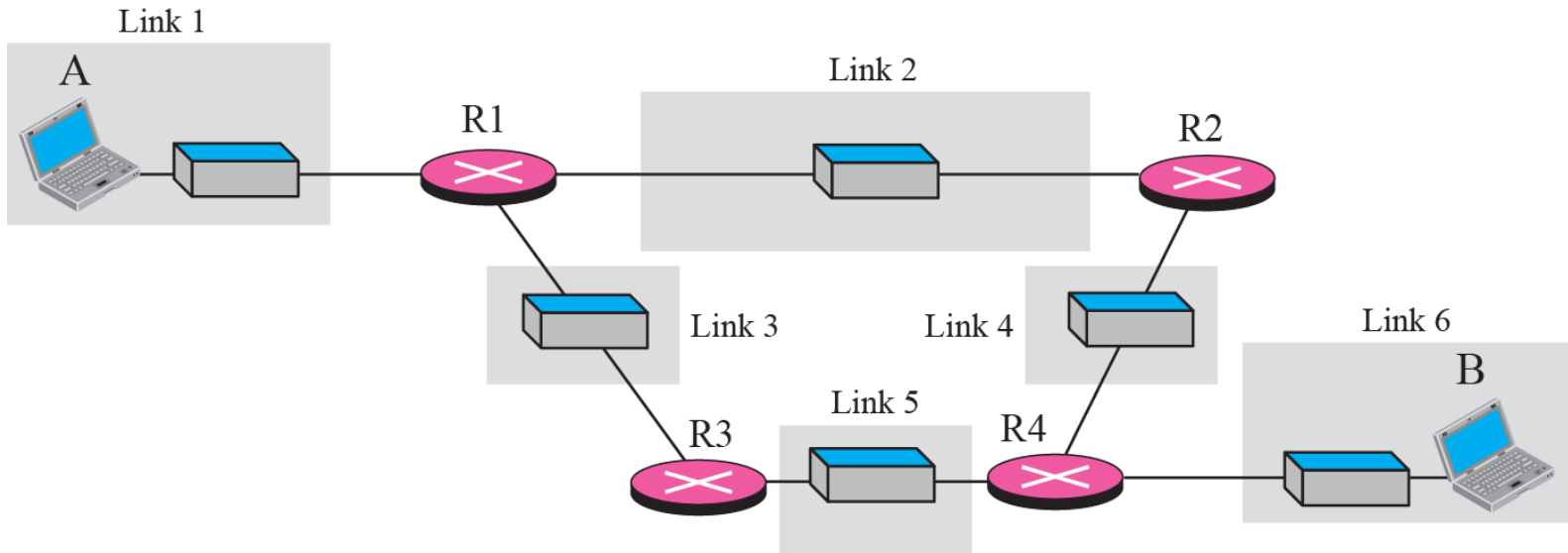
- ✓ **Comparison between OSI and TCP/IP**
- ✓ **Layers in the TCP/IP Suite**

Layers in the TCP/IP Protocol Suite

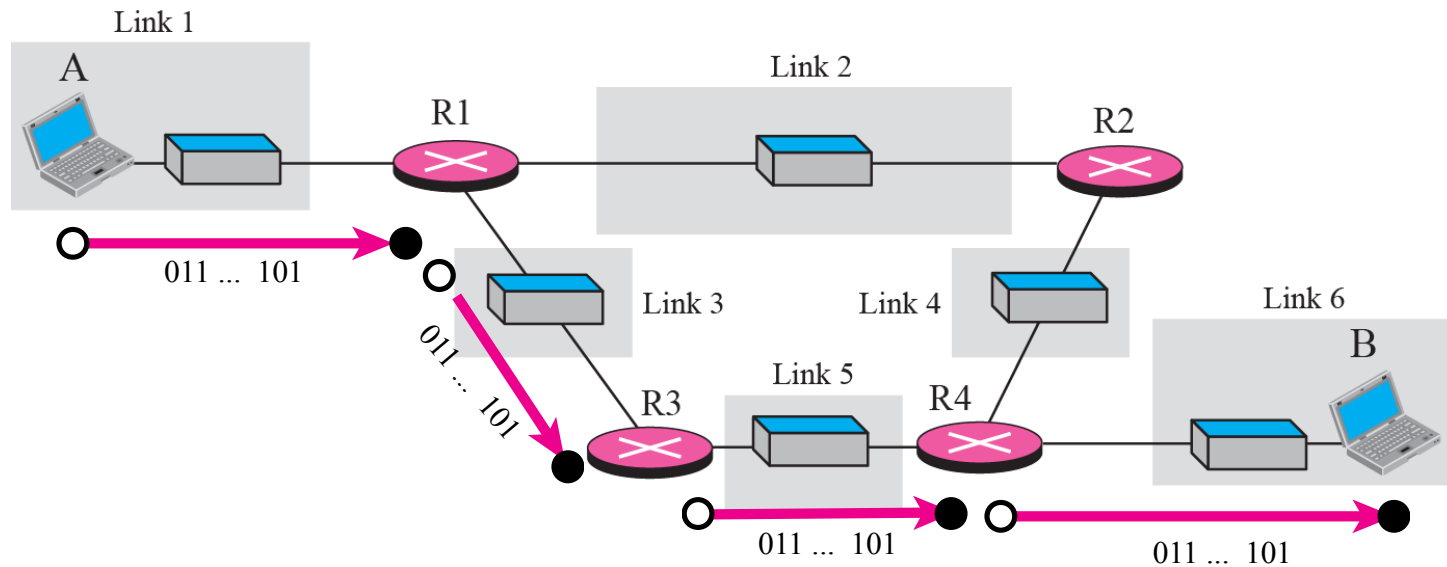
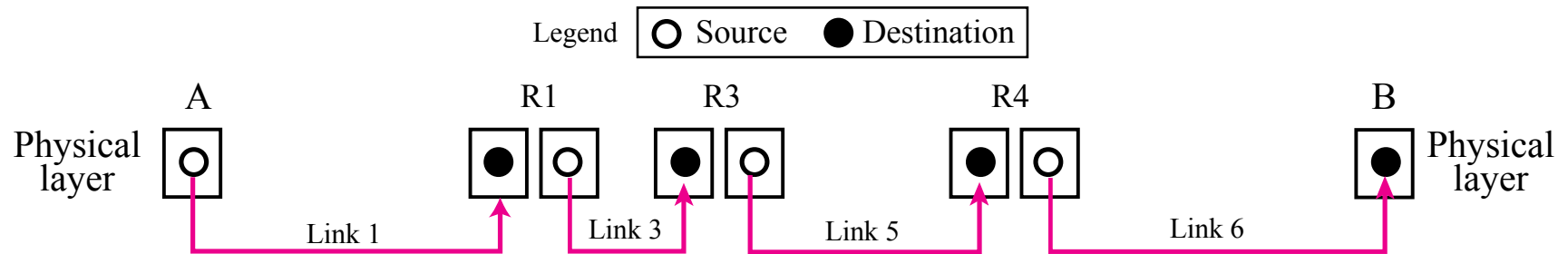


TCP/IP and OSI model





Communication at the physical layer

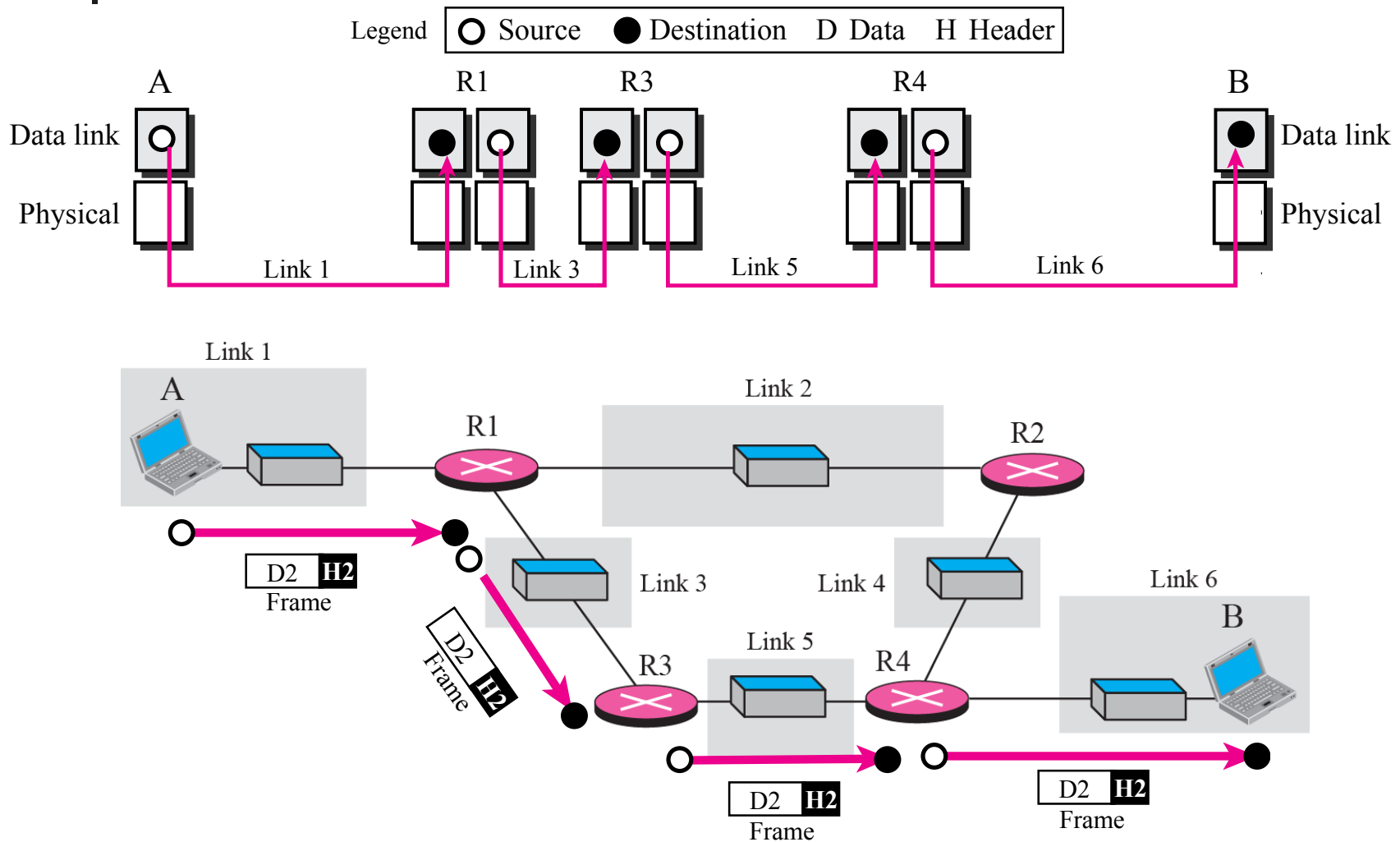




Note

The unit of communication at the physical layer is a bit.

Communication at the data link layer

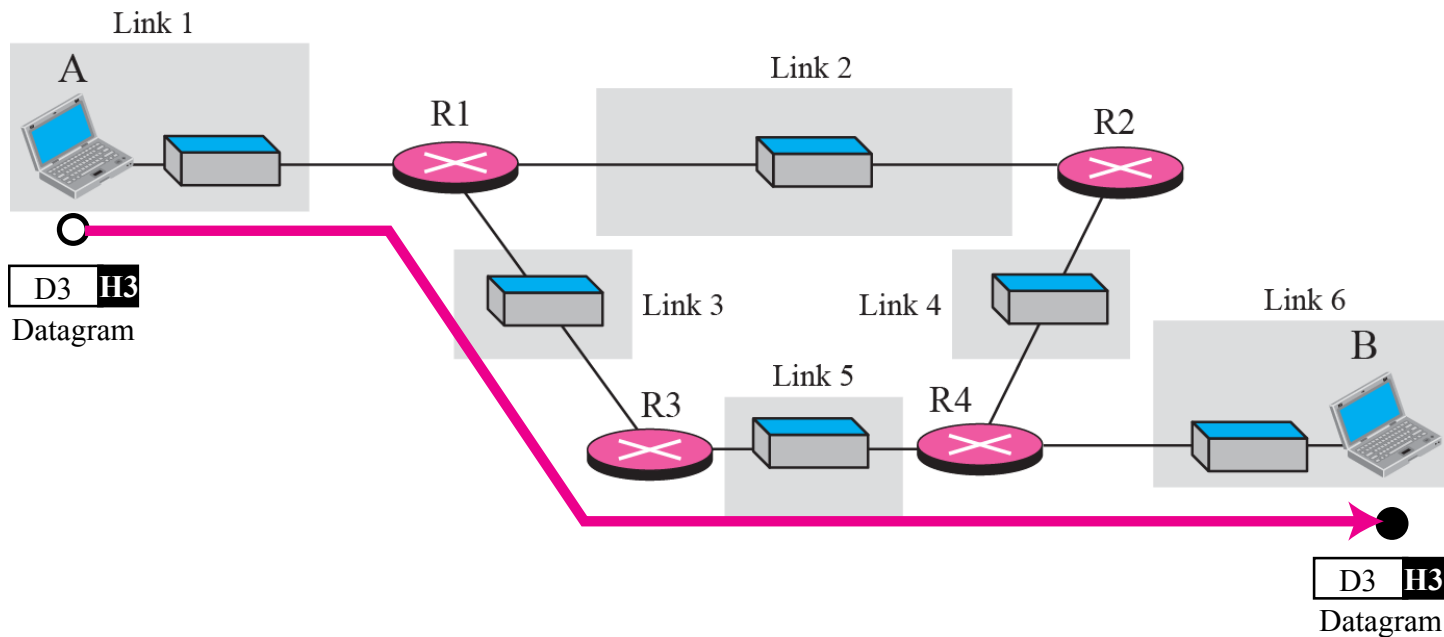
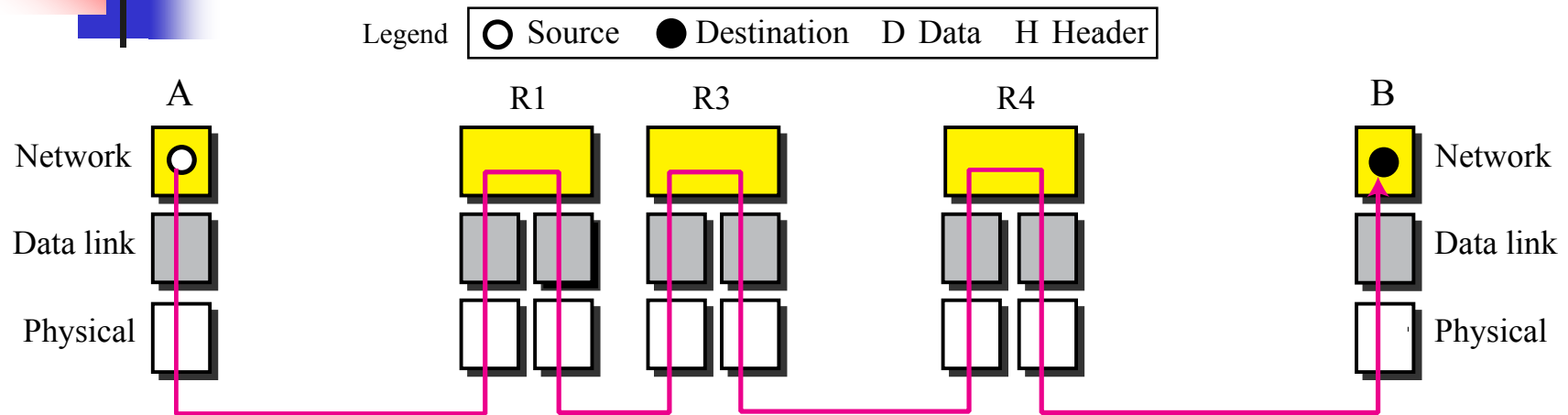




Note

The unit of communication at the data link layer is a frame.

Communication at the network layer

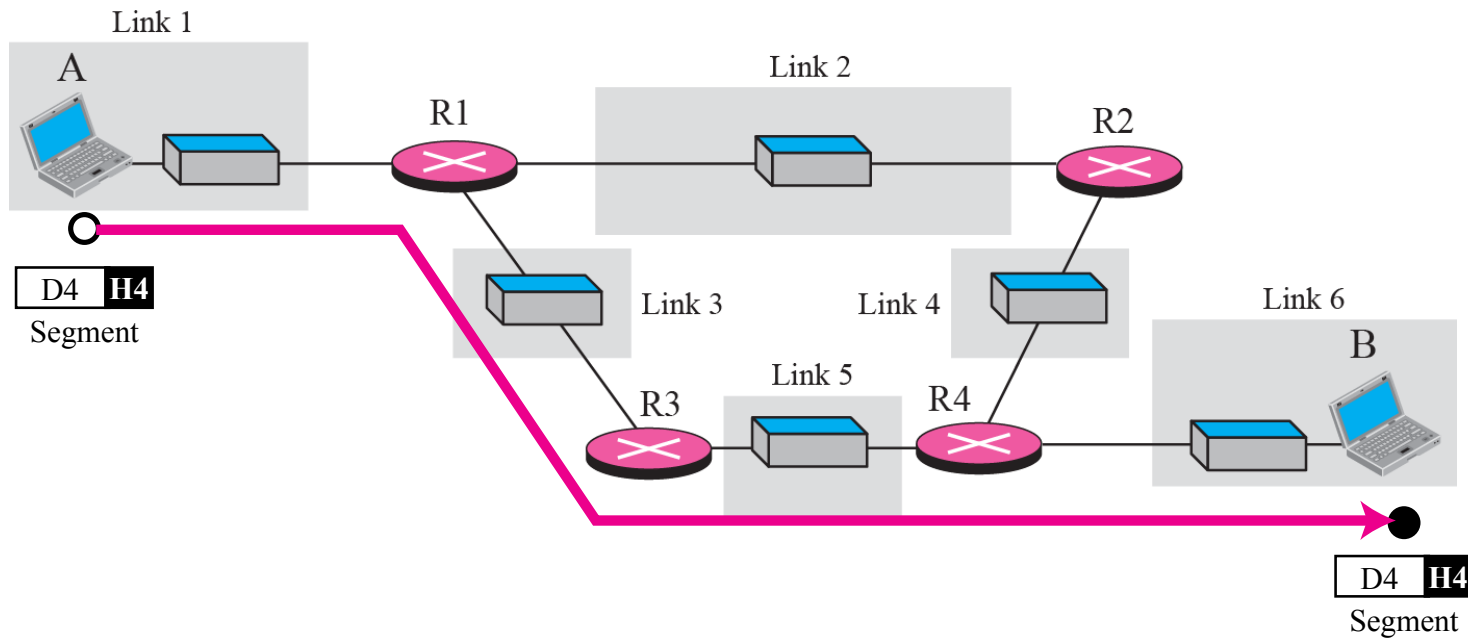
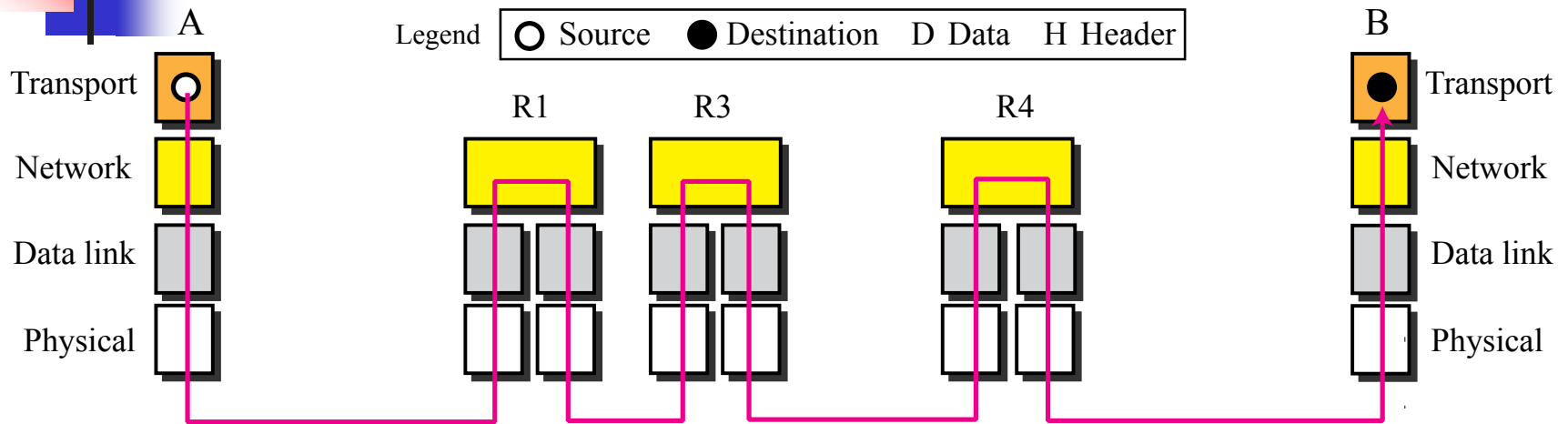




Note

The unit of communication at the network layer is a datagram.

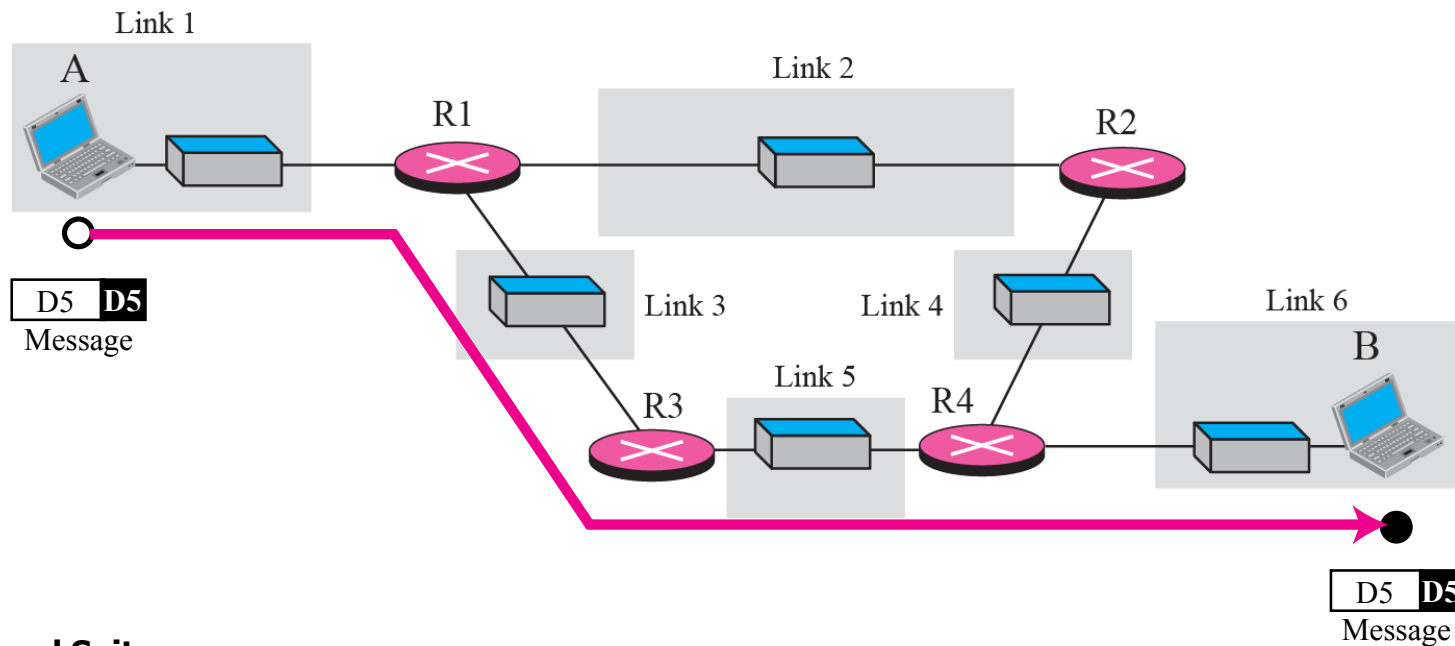
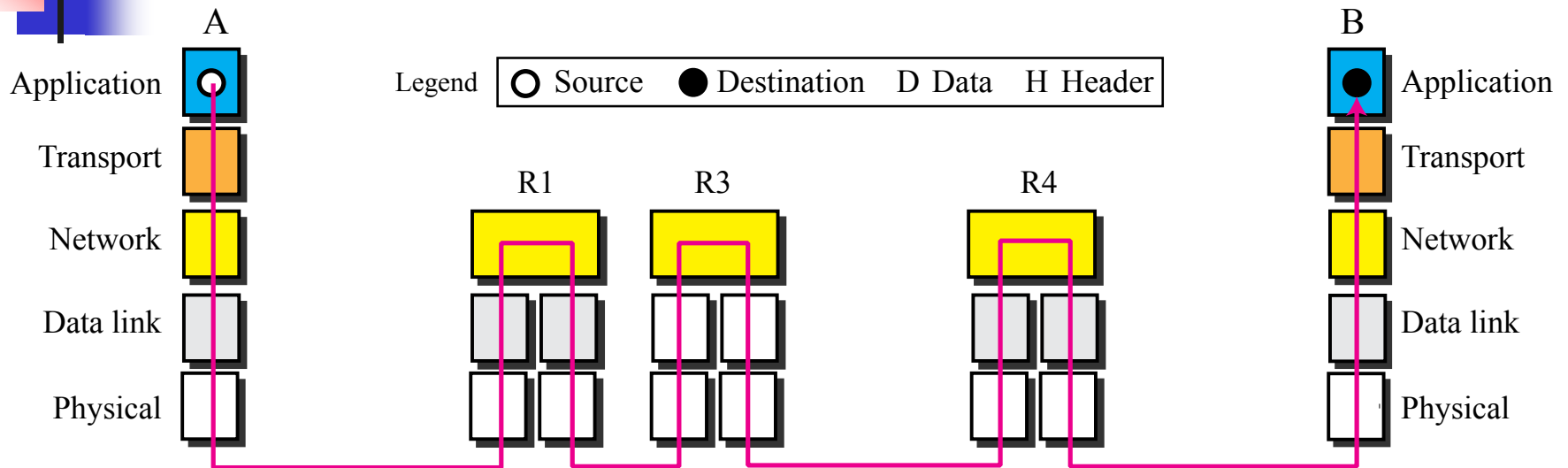
Communication at transport layer



Note

The unit of communication at the transport layer is a segment, user datagram, or a packet, depending on the specific protocol used in this layer.

Communication at application layer





Note

The unit of communication at the application layer is a message.