

Welcome to the Cloud

Chapter 1

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Business Data Networks and Security, 10th Edition, Global Edition

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Netflix Jumps Into the Amazon

Messages

Single Networks

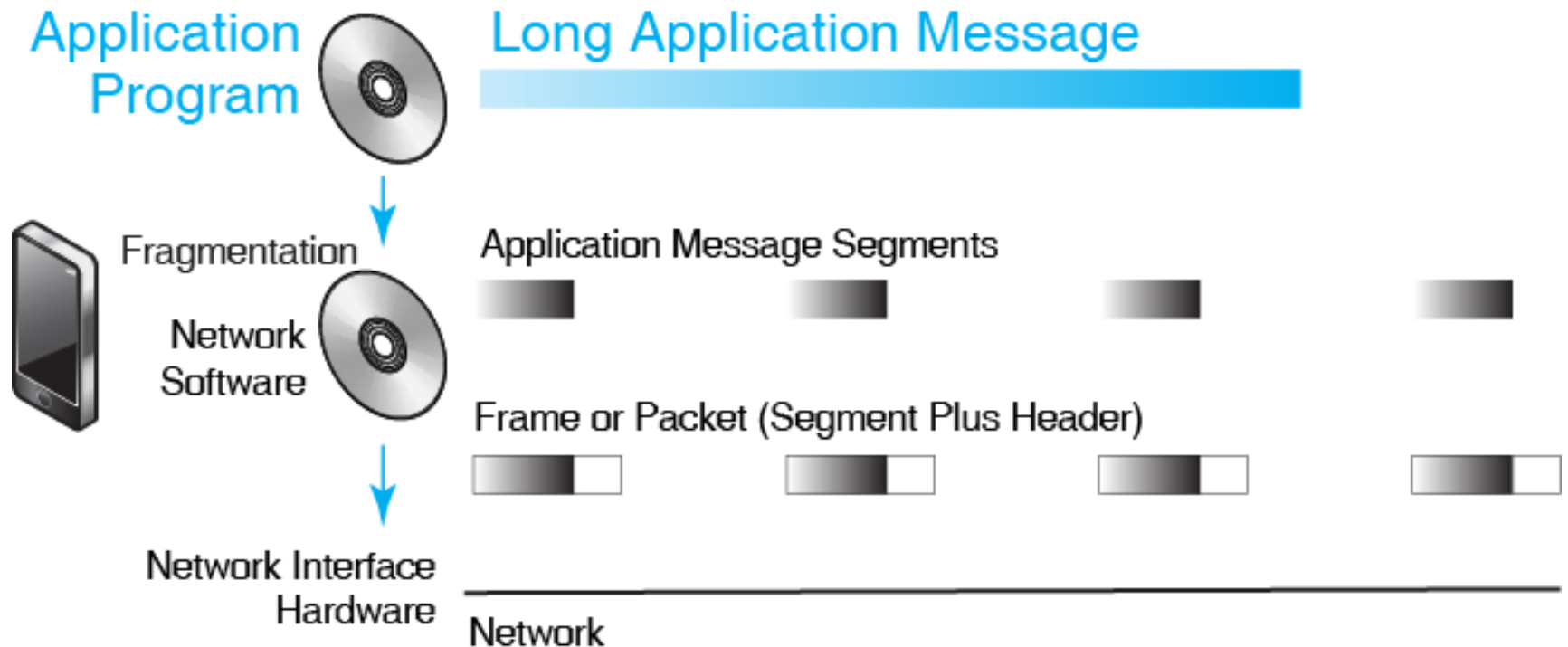
Internets

Standards Layers

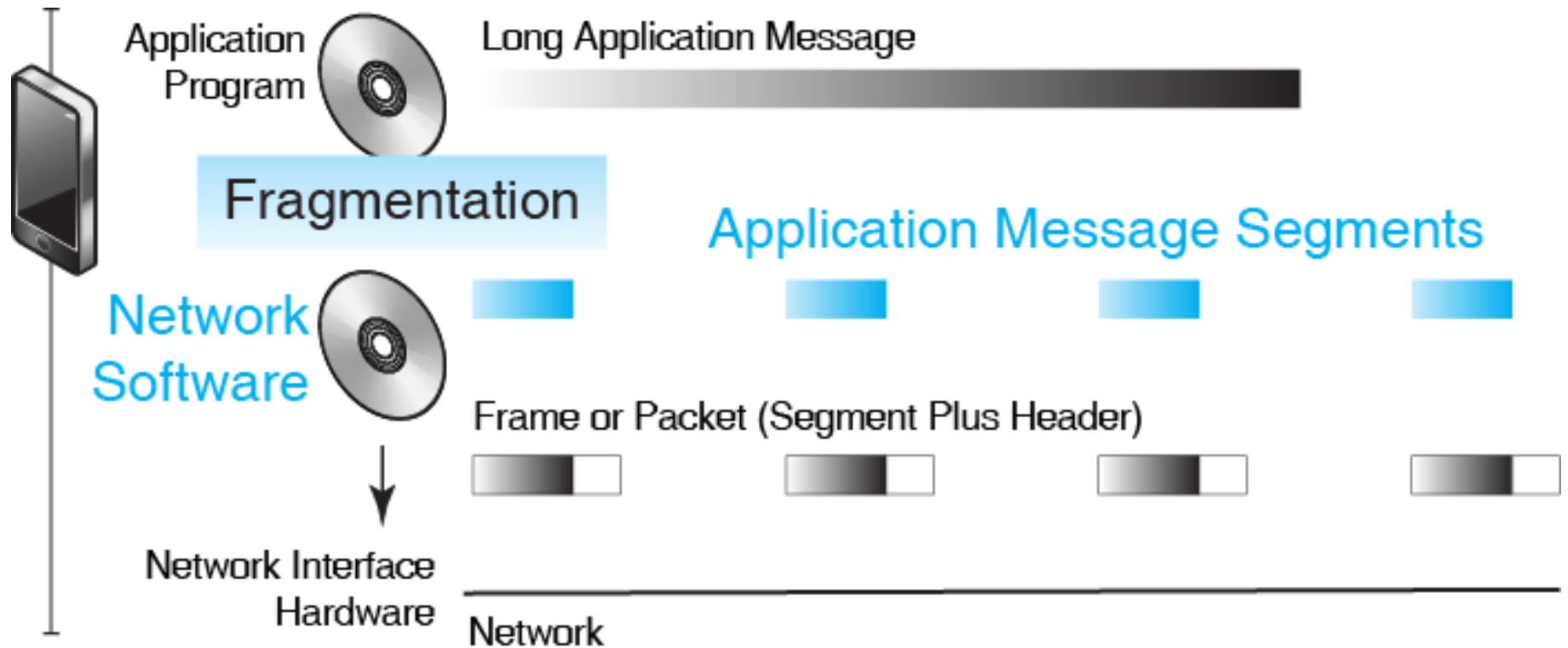
1.11 HTTP Request-Response Cycle



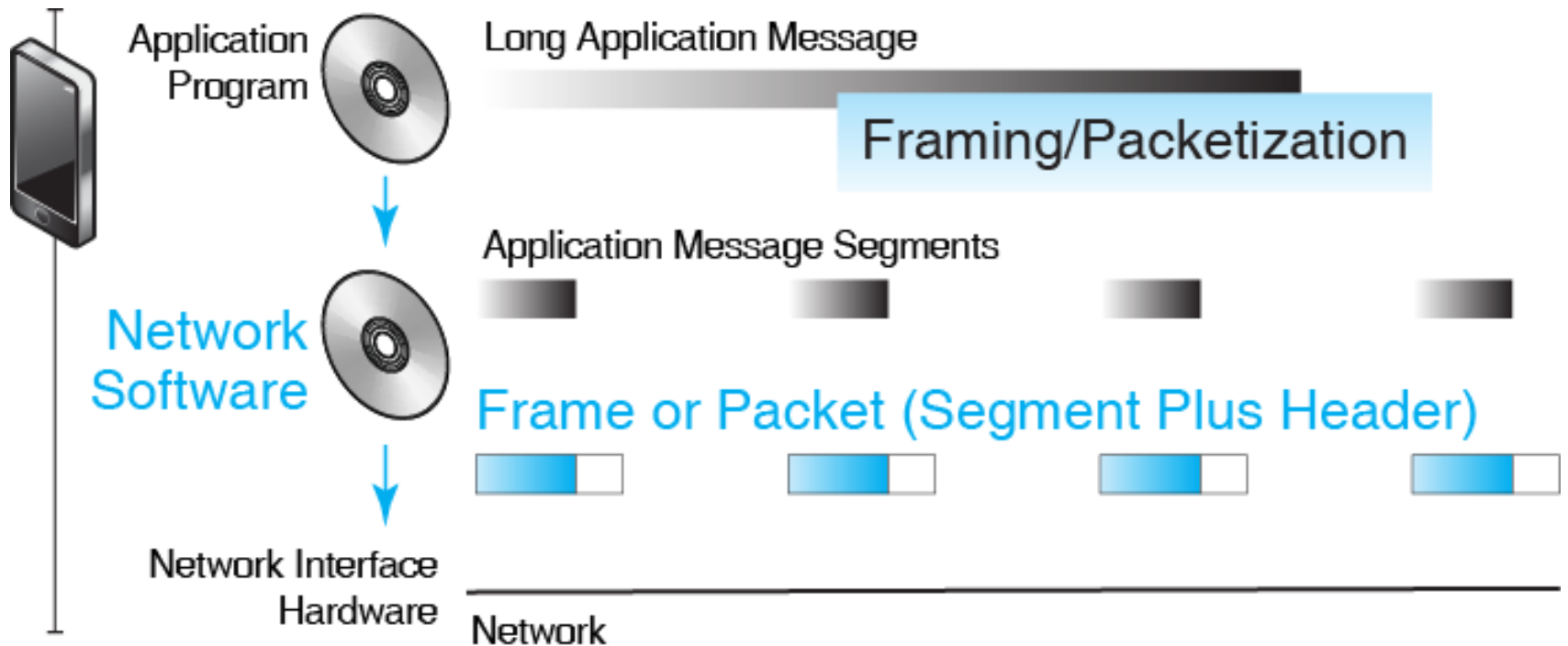
1.12 Fragments, Frames, and Packets



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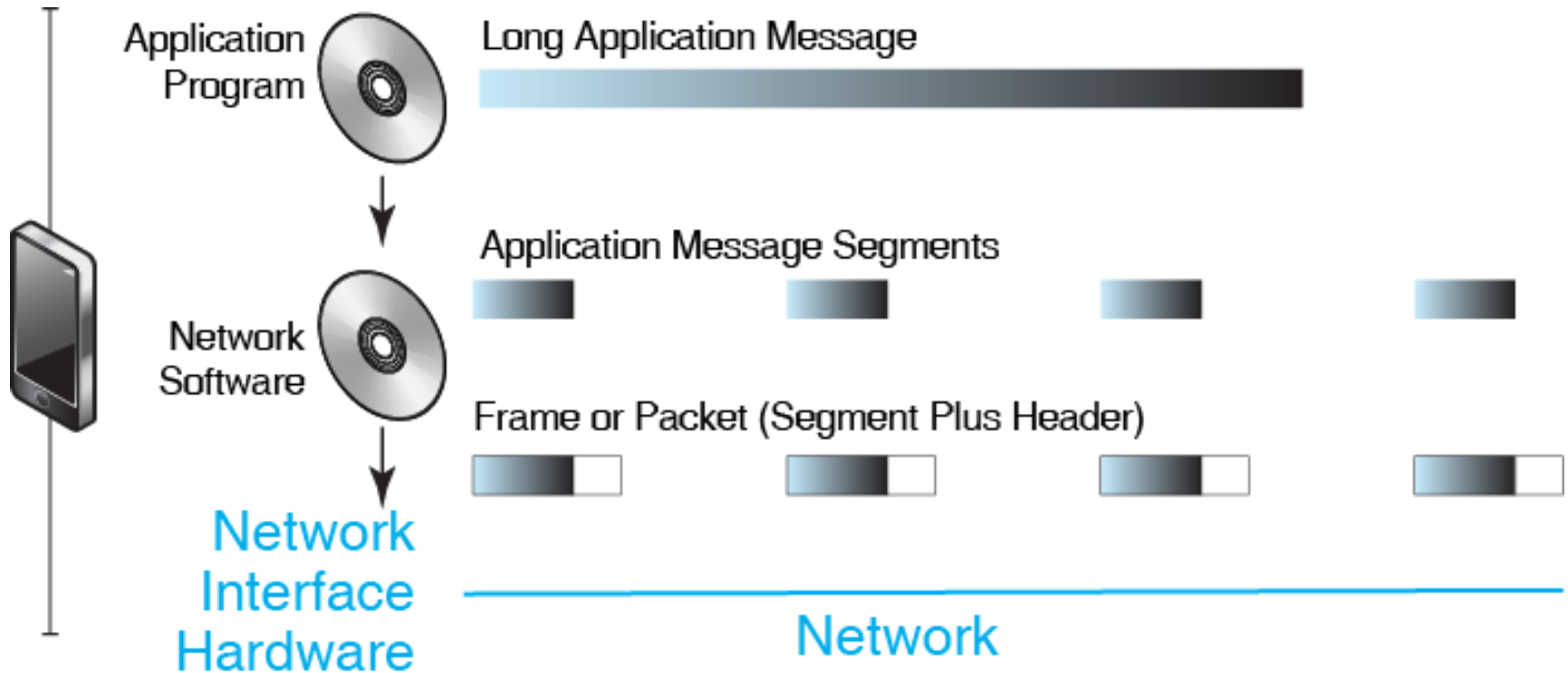


1.12 Fragments, Frames, and Packets



Header & maybe Trailer is called the envelope, that encloses the segment to form the frame or packet.

1.12 Fragments, Frames, and Packets



1.13 Fragmentation & Error Correction

No
Fragmentation



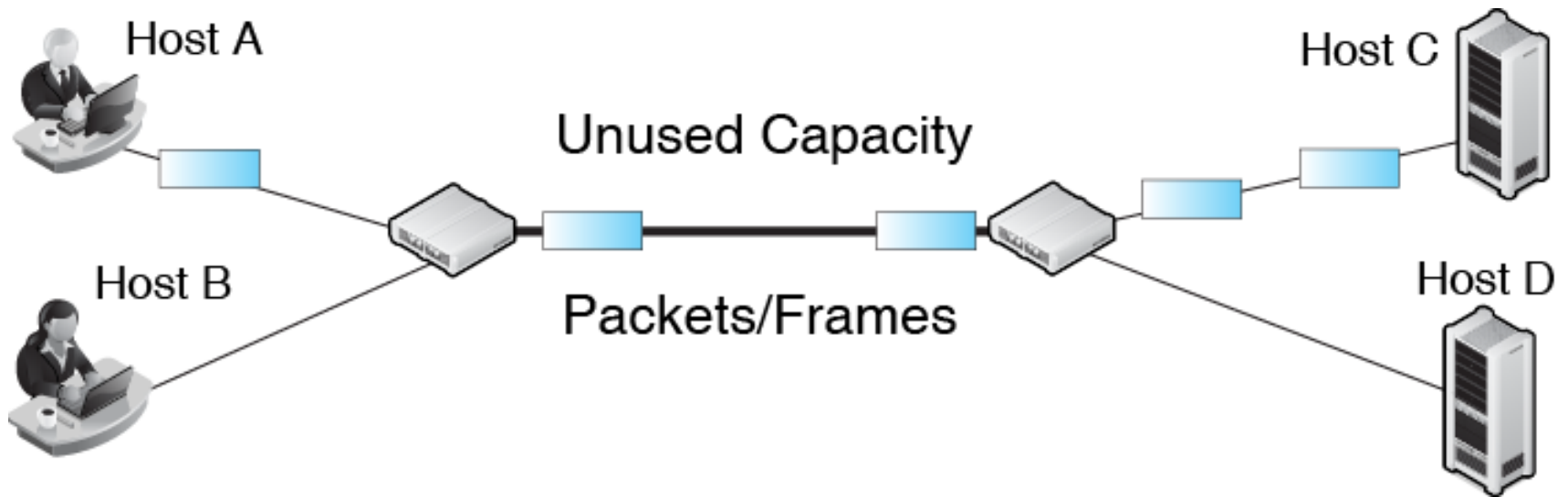
Error! Must retransmit entire message

With
Fragmentation

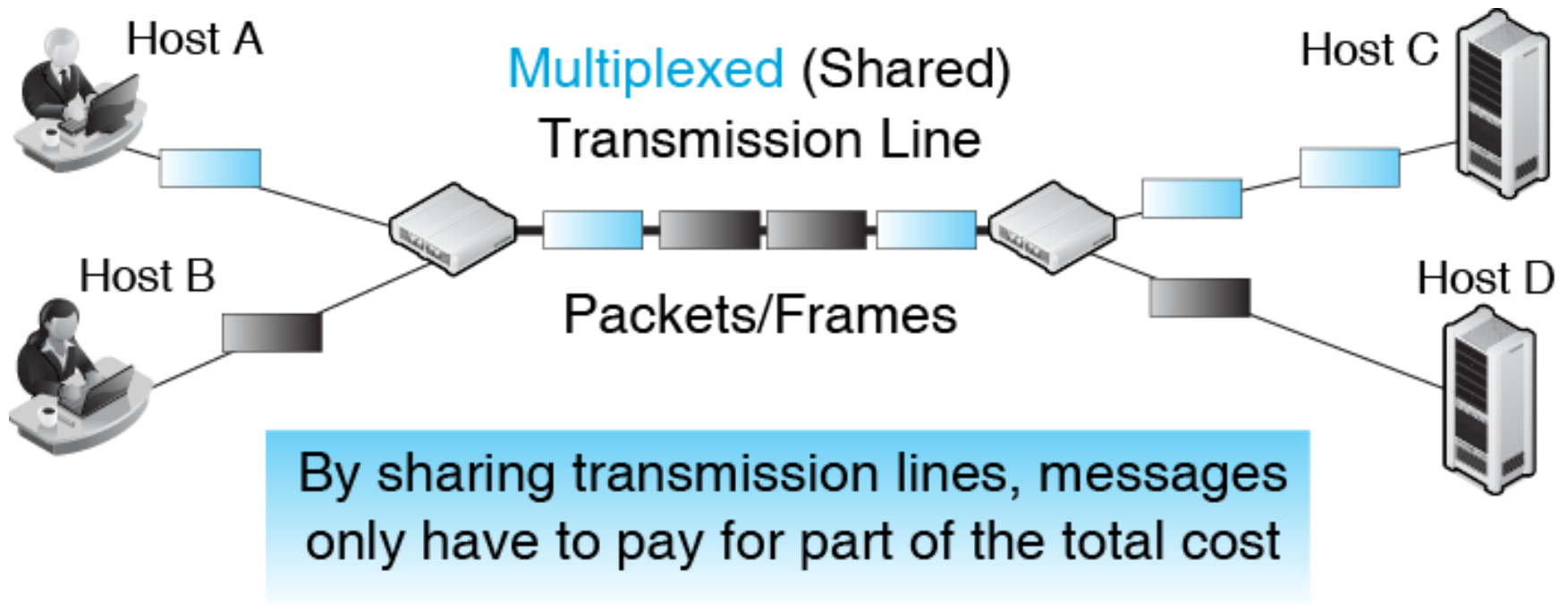


Error! Only need to retransmit a single frame or packet

1.14 Fragmentation and Multiplexing



1.14 Fragmentation and Multiplexing



MAC

- ▶ Who has heard of a MAC address?

1.15 EUI-48 Addresses

- ▶ Different single-network standards use different types of addresses
- ▶ A common type of single-network address is the EUI-48 address
 - EUI stands for extended unique identifier
 - It is 48 bits long
 - Used in Ethernet 802.3, Wi-Fi 802.11, and Bluetooth
 - However, not all single-network addresses are EUI-48 addresses

1.15 EUI-48 Addresses

- ▶ Formerly called a media access control (MAC) address
 - Still commonly referred to as MAC addresses
- ▶ Written as six pairs of number or letter symbols separated by dashes
 - Example A1-B2-CC-92-FF-00
- ▶ **Not all single-network addresses follow the EUI-48 format**