

2 Data packets – Part 1

Name: _____ Class: _____ Date: _____

Vocabulary 词汇

Write each word three times. 把每个单词抄写三遍。

English	中文	Write it 3 times (English)
packets	数据包	_____
header	报头	_____
payload	有效载荷	_____
trailer	报尾	_____
serial	串行	_____
parallel	并行	_____

Recall

Data is sent across a network in small **packets** 数据包.

New ideas

Read these first, then do the Practice.

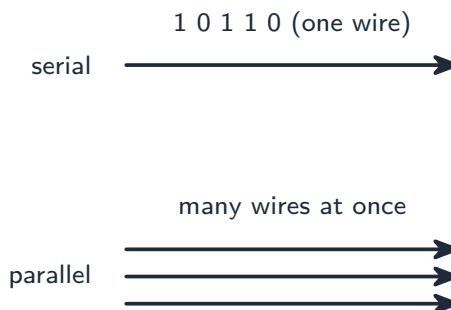
■ 1 A data packet

A packet has three parts:



- the **header** 报头 holds the address and packet number;
- the **payload** 有效载荷 is the actual data;
- the **trailer** 报尾 holds an error check.

■ 2 Serial and parallel



- **serial** 串行 sends bits one at a time, down one wire;
- **parallel** 并行 sends several bits at once, down many wires.

Watch out: a packet's three parts have set jobs — the **header** holds the address and packet number, the **payload** is the data, the **trailer** holds the error check. **Serial** (one wire, one bit at a time) suits long distances; **parallel** is faster but only over short ones.

Practice

Try these in order.

2.1 What is a *packet*? [1]

2.2 Name the three parts of a packet. [2]

2.3 What is held in the header of a packet? [1]

2.4 How is serial transmission different from parallel? [2]

2.5 Which is usually used over long distances — serial or parallel? [1]

2.6 Challenge. Explain why serial transmission, not parallel, is used to send data over a long distance such as the Internet. [2]