

Exercise 8

Sindre Hansen

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1 Task 1

Service	Corresponding in IP	Corresponding in TCP
Full duplex	NO	YES
Flow controls	NO	YES
Error detection	YES	YES
Error correction	NO	NO
Framing	YES	YES
Link access	NO	NO
Reliable delivery	NO	YES

2 Task 2

If $d_{\text{drop}} < L/R$ then there will be a collision. The reason being that before one node finishes transmitting, it will start receiving from the other node.

3 Task 3

A wireless network is either in infrastructure mode or in ad-hoc mode. In infrastructure mode every host is connected to the network via a access point. In ad-hoc mode there's no such access point and every host provides their own routing, name translation etc.

4 Task 4

If a node attaches to the network in different points over time, it is defined as a mobile node. Thus, a node with a wireless connection is **not** necessarily mobile. The user is **not** mobile, since she is continuously connected to the internet through the same access point.

5 Task 5

$$\begin{aligned}d_0 &= [[1,-1,1,-1,1,-1,1,-1] \\d_1 &= [-1,1,-1,1,-1,1,-1,1]\end{aligned}$$