3.40 Going Mobile LO1

Key your name: Click or tap here to enter text.

**Exercise 1**



Exercise for Networks

Goal is to identify the network being used in a scenario.

Instructions

As we have learned there are a range of different networks that are used including **LANs, WLANs, WANs, and MANs**. Your task is to fill in the table below. On the left is a range of network setups described in various locations. You need to identify whether the network is a LAN, WLAN, WAN or MAN and fill in your answer in the right column as the example shows.

Optional Quick Tip: It may help to draw an illustration of each scenario on a piece of paper to help you identify what form of network is being used.   
Refer to the presentation Introduction to Networks for help

|  |  |  |
| --- | --- | --- |
| **Scenario** | **Form of Network** | |
| Example:  A small bookstore where computers at the checkout counter are connected to each other and another computer in the office, which is used by the manager to track sales and for ordering stock. The office also contains a wireless printer for printing invoices. | LAN (Local Area Network)  Optional: My drawing: | |
| A national furniture shop has 3 stores located in Christchurch, Dunedin, and Invercargill, while also having a main storage warehouse also located in Christchurch. Each store has 3 counter computers and a computer within the office which are interconnected. Each store can also order in additional stock from the Christchurch warehouse. | Click or tap here to enter text. | |
| A new café/restaurant has opened in Hanmer Springs called E-Springs. This store prides itself on being a high class and sustainable company. They use the latest form of eco coffee machines and all transactions are completed on a small tablet and wireless eftpos machine. Customers may still request a printed receipt, otherwise they can have it emailed to try and encourage lower consumption of paper.  E-Springs has all transactions transferred automatically via Wi-Fi to the main computer in the upstairs office. | Click or tap here to enter text. | |
| A new taxi company is planning to open in Napier. They aim to have the best and most widespread service available. They set up their main base in the north of Napier, but also setup a small office in the south of Napier to ensure vehicles are available quickly within the south of Napier.  The company prides itself on having the latest communication system where on-board computers and radio systems are installed on all shuttles and taxis to provide integrated communication and networked navigation to all vehicles. This system is controlled at the north Napier base, however is also administrated by two employees at the south Napier office. | | Click or tap here to enter text. |
| A new premium security firm in Hastings has been established for small businesses. They claim that they can monitor and catch any security breaches using the latest alarm and video security system. They operate by installing their alarms and security cameras in customer’s buildings and these alarms are all wirelessly monitored by the firm. The firm has offices setup in Central Hastings, Napier and Taradale, and includes a fleet of security cars and agents that patrol locations around the offices.  When an alarm is tripped a signal is automatically sent to the nearest security office which looks at any live camera feeds available and sends a security car out to the location.  Each car also has a mobile device which can view the live feed of the security camera and identify any potential risks before arriving at the location. This sophisticated system is the pride of the security firm and all alarms, cameras, and communications are integrated on one private network. | | Click or tap here to enter text. |
| Jake loves gadgets. He has many within his home and in his spare time has programed his own applications so that his various devices are networked together.  As well as the three computers in each of the bedrooms he has a 70-inch smart TV which can run movies from his phone wirelessly. Jake also loves the ability to use his smartphone as a remote for the TV. As winter approached he installed a brand new heat pump system which again is controlled by his smartphone where he can adjust the temperature in any room with one swipe on his phone.  This is all done on the same network he has created within his home where all devices are able to communicate together. | | Click or tap here to enter text. |
| PetTech, a pet toy store located in Wellington has had great success in selling its electronic toys for pets to keep them preoccupied while their owners are busy. They are now looking to expand to Palmerston North and have setup a new store. The owner of PetTech wanted to ensure that either store would always have stock of the latest and greatest of products, so they have setup both stores to run on the same network.  They use a database on the network which keeps track of both store’s stock and allows either to fill in an order form and send it to the suppliers for additional products. | | Click or tap here to enter text. |

Exercise for Transfer speeds

Sort transfer speeds into the correct order

Instructions:

It is important to be aware of transfer speeds and the measurements around them as these speeds indicate how fast data can be transferred through the cable or device.

Feel free to use the transfer speed table to help you complete this task.

Sort the following measurements into order with the highest speed displayed at the top to the lowest speed at the bottom.

### TRANSFER SPEEDS

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | Transfer Speeds |  | Key the speeds sorted into Highest to Lowest transfer speeds | | 687 mbps | Click or tap here to enter text. | | 1698 mbps | Click or tap here to enter text. | | 100 gbps | Click or tap here to enter text. | | 346 kbps | Click or tap here to enter text. | | 6981 kbps | Click or tap here to enter text. | | 2566 mbps | Click or tap here to enter text. | | 765 gbps | Click or tap here to enter text. | | 3358 bps | Click or tap here to enter text. | | 2124 mbps | Click or tap here to enter text. | | 2987 kbps | Click or tap here to enter text. | | 4756 bps | Click or tap here to enter text. | | 8643 kbps | Click or tap here to enter text. | |  |

**Note: there are 2 bps, 4 kbps, 4 mbps, 2 gbps**

**Save and close the document and go back to your workbook**

Exercise for WIFi technology

Not sure? Look at the PowerPoint presentation.

|  |
| --- |
| Answer these questions |
| How does WiFi work?  Click or tap here to enter text.  What is a Mobile network?  Click or tap here to enter text.  What is a Hotspot?  Click or tap here to enter text.  What is Bluetooth?  Click or tap here to enter text. |

