Assessment 2 - Operating Systems and Networks  
  
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**Part 1**

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|  | **Vendor** | **Features** | **Issues** |
| **Windows** | Microsoft | * Task Switching * Windows Easy Transfer * Upgrade anytime * Organized Searching * Remote Desktop | * Space needed to install new versions * Upgrades may need new hardware too * Unnecessary notifications * Security problems |
| **OS X** | Apple Inc. | * UNIX type of operating system * Spotlight Searching * Time Machine * Handoff/Airdrop | * Slow to Start * Frozen loading wheel * Slow Safari Browser |
| **UNIX** | The Open Group | * Shell terminal * Multitasking * Kernel/Shell communication * Quick Processing | * Low support for GUI * File deletion is permanent * No Exceptions in UNIX API * No Robust Security |
| **Linux** | The Free Software Foundation | * UNIX type of operating system * Portability * Virtual Memory * Wide Hardware Support * Strong Security | * Too many managers makes it difficult to learn * Lack of professional software * Slight Hardware Compatibility issues |
| **Chrome OS** | Google | * Fast Boot Time * Strong Security * Functional Application Menu * Supports x86 and ARM | * More of a companion device * Only browser support for Office * Limited to Chrome apps |

**Part 2**

**Types of Networks**

There are several different types of networks out there ranging from small networks for homes to huge networks for global companies. A small network example could be a PAN (Personal Area Network) which is the typical setup a person would have in their home. It usually consists of a modem, router and computer communicating with each other. A slightly larger version of a PAN is a LAN (Local Area Network) which connects groups of computers or devices together across fairly short distances such as an office building. WAN (Wide Area Network) is the larger version of the Local Area Network and it connects devices over much larger physical distances. The Internet is a perfect example of a WAN because it connects virtually every computer in the world to this vast network. Another common network type is VPN (Virtual Private Network). These are used to access a private network when a computer may not be physically connected to that private network. A VPN extends a private network across the Internet allowing a user to login and see the network’s data from miles away from home or a business. (Bourgeois, 2016)

**Bluetooth**

Bluetooth is a wireless type of connection technology that allows a person to connect devices together. It is similar to Wi-Fi but Bluetooth’s range is a little shorter while the connection reliability is higher with Bluetooth. It has several advantages such as compatibility with just about every device offering Bluetooth connectivity and enhanced security because a user only needs the network to be active when they are currently using it unlike Wi-Fi. (Poland, 2018)

**RFID**

Radio Frequency Identification (RFID) is a type of data management system that electronically tags items and objects. The tag can be read by a card or tag reader to send and receive data electronically. RFID is beneficial in almost every situation where security and automation are needed. It assists with keeping track of a company’s valuable assets and their equipment. The technology is stable and simple to use for just about any user. A new use for RFID is actually already being experimented with but I think it is such an interesting idea. That idea is the use of RFID in shops like grocery stores. Amazon is attempting this right now with their physical store that uses RFID chips within each item in the store and chips are scanned when the customer walks out. There is no need for cashiers because the chip is scanned when leaving, the amount identified on the RFID is charged to the person’s bank account and the receipt is emailed to them automatically. (Bianchi, 2017)

**Major Challenges**

One of the major challenges of wireless networks is the fact that there is nothing physically connecting them. Wireless networks are great for large buildings like corporations or hospitals but those buildings come with huge challenges that a lot of people suffer with every day. Getting a strong network signal in buildings like that is difficult because of the amount of walls and ceilings that block the user from the source of the network connection.

**Production: Support or Hinder**

A business may have their own network to make business run smoother and faster by giving better and quicker access to data. This can boost productivity because there is no latency with getting the information that is needed to complete a job. On the other side of that same coin is the possibility that the company’s network could go down or have issues. When that happens it essentially puts a pause on all work because the network houses the information that these companies need. Going through the process of getting support through your service provider may take quite a while and that is valuable time that could be spent completing work.

**References**

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