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(a) Advantage: Computerised systems are much more efficient at storing and retrieving data / information than their paper based counterparts. This is because all data is electronically stored and does not have to be physically stored or sorted.

Disadvantage: Computerised systems may incur a high recovery cost. If there is a failure in some component of the system, unless a backup has been made, all data or partial data loss may occur. This can mean that the centre is unable to operate for a period of time or they have to manually re-enter all data that was stored in the system.

(b) There are several issues relating to the storage, retrieval and display of high resolution images in this information system.

The storage of high quality images creates large storage overheads at the point where the data is actually stored. The server or main computer depending on the architecture employed would need to have large mass storage devices available to store the

images. The process of backing up the data also becomes a bigger problem because in order to backup the large volume of graphical data, a high capacity backup unit of some kind is required.

The transport layer is also an important factor in the retrieval of the images for display. Although the server may have high speed (SCSI Ultra 160 Mb/sec for example) storage devices that have a high capacity, it can only be accessed across the network as fast as the network runs. As a bare minimum, a 100BaseTX network would be required to provide a reasonable speed transport for these large files. 100 Mbit Ethernet at full duplex (100BaseTX) provides transfer rates of 1 – 20 Mb/s, with any speed above 10 Mb/s being a burst of data when little other network traffic is occurring.

The workstations that are used to access the data would need extra processing power in order to render the images for display due to the overheads created by high resolution images. They would need extra RAM to assist the CPU in storage and

displaying the image due to the complexity of operations that are performed in the CPU and video processor or the video output device when rendering a high quality image.

If one of these factors is not considered, it would cause the system to function very slowly and become unusable.

(c) The doctors and receptionists would have different views of the data because they both require different aspects of the information stored about each patient.

The receptionist only needs their personal details such as address, contact info, health care number etc so they can perform their administration tasks.

The doctors require all information about previous consultations, previous illnesses and/or injuries to assist them when making diagnosis and prescribing treatment to the patient.