Data Transfer

Due the enormous increase of programmes and computers over the last 15 years people have needed to be able to TRANSFER data between computers and different programmes.

◇ **File Conversion**

- Being able to convert data is crucial for today's users. *Consider having to update an antiquated spreadsheet that could not be read by a modern programme. In theory it could take months to re-enter the data.*
- System designers saw the possible problems and now most newer programmes can read older versions. *(Also this is a way to persuade you to buy the newer version as it doesn't cost you time.)*

◇ **ASCII** *American Standard Code For Information Interchange*

- This is a code that was developed to represent characters as binary code.
- *For example:*

  A *0100 0001*

  B *0100 0010*

  Space *0010 0000 etc. see page 75*
- All computers can store ASCII.

  Write your name in ASCII Code.

◇ **Transfer of files - Word processing**
- Transfer between word processors was the most important break through, now you can bring a Word file into the lab and the Mac's can read it too.
- However this was not always reliable, the only way to ensure transfer was to save your document as an ACSII file or more recently as a RTF (Rich Text Format). The main problem with doing this is that some of the document formatting would be lost lost.

◇ **Transfer of files - Database / Spreadsheets**
- CSV *(Comma or TAB separated variables)* is the database and spreadsheet equivalent of ASCII or RTF and most database and spreadsheet programmes are able to read documents stored using this format.

◇ **File handling**
- To be able to manage our data we often need to move, delete and copy files.
- A system for being able to manage our files is available in Windows: *Windows Explorer* and also in the Macintosh lab, using *At Ease*

◇ **Compression**

- As the demands on computers has increase, the size of the memory has increased. Many students find that a floppy is too small for their course work and thus end up using zip drives to transfer data around.
- Compression works in a number of ways, *there are many compression programmes!* Most change the bit patterns of the characters as they are being sorted so that the data takes up less space.

For example: if there was a document with a large space at the bottom, it would normally be saved as white white white as many 'white' as there are pixels, a compression file would reduce this by saving 'white x the number of pixels'.

◇ **Digital and Analogue Data**

- Digital data is data that is usable by a computer, it has quantities that can measured and jump from one value to the next.
- Analogue data is data where quantities vary infinitely.

For example: *a computer connecting to the internet has to use both digital and analogue data. The modem converts the digital computerised signals to analogue data so that it can be sent down a telephone line, that's why you hear the signals, at destination the analogue data is converted back into digital so that the relieving computer can process it.*