

SERIAL AS OPPOSED TO PARALLEL

Advantages

Nearly all programs can run on with serial processors, there is no additional complex code to be written.

All types of data are suitable for serial processing

Data can use the previous result in the next operation

Data sets are independent of each other

Cheaper than parallel

The Von-Neumann bottle neck can slow data transfer in VN architectures.

Both the program and data share the same memory, it is possible that trashing can occur with poorly written programs

Disadvantages

PARALLEL AS OPPOSED TO SERIAL

Advantages

Faster when handling large amounts of data

Not limited by bus transfer rate

Can make maximum use of the CPU

Programs and data are stored separately usually

Only certain types of data are suitable for parallel processing

Data that relies on the result of the previous operation can not be made parallel

Each data set must be independent of each other

Usually more expensive

Disadvantages