Huffman Coding Algorithm

**Introduction**

Data compression involves encoding the given information and

representing them using fewer bits than the original representation. A

simple characterization of data compression is that it involves

transforming a string of characters in some representation (such as

ASCII) into a new string (of bits, for example) which contains the same

information but whose length is as small as possible. It is useful because

it reduces the resources required to store and transmit data. As a tradeoff

for cheaper and faster transmission of data, computational resources

are consumed in the compression and the decompression process.

Data compression paradigm involves trade-off among many factors, like

Compression speed, Degree of compression, Decompression speed, and

the computational resources required for compressing and

decompressing the data.