Abstract

Character encoding determines a term which represents a repertoire of characters by some kind of encoding technique. It covers a huge area of applications such as data communication, storage of data, textual data transmission and database technology. In this paper, a new technique of compression for text data is proposed which encodes a character by 6 bits namely 6-Bit Encoding (6BE). Actually the working method of this technique is encoding an 8 bit character by 6 bits. This technique works with the characters which are printable. For encoding a character to 6 bit, it uses a lookup table. Firstly, it divides the characters into 4 sets and then it uses the location of characters uniquely to encode by 6 bits. By this procedure 8 bit characters are converted into 6 bits by this 6BE technique. At First, this technique on simple text. It is found that, the 6BE technique can able to compress the original text by 25%. After that this 6BE technique is used in proper database technology by compressing the text data in a table of a database. The 6BE is able to compress as well as decompress the original data with the help a lookup table. The reverse technique is also detailed for decompression to get back the original table. The outcome of 6BE technique is also applied to compress again by the known algorithm
Huffman and LZW. The experimental result shows promising performance. The technique is further discussed by some examples and descriptions.

References

17. Sushila Aghav, "Database compression techniques for performance optimization, 2nd International Conference on Computer Engineering and Technology (ICCET), 10.1109/ICCET.2010.5485951, 2010".

Index Terms

Computer Science Circuits and Systems

Keywords

Encoding, Compression, Decompression, 6-bit encoding, Compression ratio.