ABSTRACT

The amount of information in today’s world is being generated at an ever increasing rate. Hence, data compression is needed to efficiently store, organize the data and transport the data over the limited-bandwidth network. There are major methods of text compression techniques like the creation of specialized new text compression algorithm and new text transformation algorithm. In this thesis, the modeling ideas are focused on word based text transformation of textual files. The text transformation is a process, which reversibly transforms a data into some intermediate form by suing direction areas. The transformed data can be compressed with most of existing lossless data compression algorithms like Bzip2, Gzip with better compression effectiveness than achieved using an untransformed data. For storing the words, one needs an enormous storage space as a dictionary. This dictionary may be either static or dynamic. In this thesis, both the dictionaries are being used for implementation of transformation algorithms. In general, word based text transformation algorithm gives the high compression force on average. This dissertation presents the well-known reversible data transforms that improve effectiveness of lossless data compression algorithms.