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ABSTRACT

Data Compression shrinks down a file so that it takes up less space. This is desirable for data storage and data communication. Storage space on disks is expensive so a file which occupies less disk space is "cheaper" than an uncompressed file. Smaller files are also desirable for data communication, because the smaller a file the faster it can be transferred. A compressed file appears to increase the speed of data transfer over an uncompressed file. Video compression is the last step before uploading your file online. As the name implies, compressing video reduces its file size. This is very important, because smaller files upload faster, save bandwidth and storage costs, and load quicker when played back. However, if video is compressed too much, the file can lose its detail, resolution, clarity, and much more. In this conducted research, the author proposed new video compression techniques for surveillance videos and clinical medicine videos using 'frame cut-off' technique which is a novel approach in compression video where the movement is minimum. Also the author implemented the proposed algorithm using Java technologies and MATLAB image processing tool and tested with CCTV and medical video processing such as EGC, Intensive Care Unit observations. The interpreted results show that the proposed algorithm compresses the videos five times better than the existing video compression techniques. The pros of the proposed algorithm are that it is well suited for the videos which have minimum movement, for example CCTV footage. The cons of this proposed solution is that the better results cannot be achieved for normal videos which have high movement such as cine movies. However, the content mining techniques are applied efficiently in order to increase the compression ratio and it can be further investigated to increase the high movement videos to compress better.