

performed between adjacent image data values in both the horizontal as well as vertical directions. The bit-planes formed as a result of the above-mentioned comparison in the horizontal and vertical directions are respectively combined by a binary addition method. After this the resultant bit-plane positions are called as RCC bit-planes. The zero values in the RCC bit-plane are the only ones that are to be stored for lossless reconstruction of the original image. Such values corresponding to the same locations in the original image matrix as zeros in the RCC bit-plane are called as RCC data values. All the other image data values can be reconstructed by using the RCC data values and the horizontal, vertical bit-planes.

In case of a lossy system of implementation, the adjacent pixels are not only compared for repetition, but also for the difference value. If the difference value between adjacent pixels is lesser than a given arbitrary threshold value, then the two adjacent pixels are made as the same. This further increases the number of repetitions in the image data and therefore also increases the compression ratio after Repetition Coded Compression is applied. The value of the threshold can be varied according to the requirements of the particular application and system. The higher the threshold, the better the compression ratio and also higher loss in the quality of the reconstructed image.