

In one-dimensional RCC Method only one bit-plane is used to code the repetition in the horizontal direction.

But in two-dimensional RCC method, two bit-planes are used to code the repetitions in both the horizontal and the vertical directions. This is more efficient and gives a better compression ratio.

This clearly proves that the compression system is implemented without any multiplications and complex transformations. It is purely based on a mathematical comparison of adjacent image data values. The comparison is 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