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.

Figure – 1 illustrates the entire image compression system based on Repetition Coded Compression on a hardware implementation. The raw analog image signals are captured by the camera and are converted into respective digital data by a analog to digital converter. This digital data is rearranged into a matrix of image data values by a reshaping block. The reshaped image matrix is stored in the embedded chip, which performs the entire RCC system. This therefore gives the compressed RCC data values and also the bit-planes for storage, archival and future retrieval.

Figure – 2 is a sample image of the human brain which is captured by magnetic resonance imaging (MRI) and this sample image would be used to demonstrate the compression achieved by Repetition Coded Compression system. It is a grayscale image.