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| Title | Spatial Domain Lossless Image Compression Technique by Reducing Overhead Bits and Run Length Coding | | |
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| Abstract |  |
| With the invention of Internet and communication network, amount of data sharing and transmitting has been increased. Because the bandwidth is always limited, whether the Internet or a Local Area Network is taken into consideration,  transmission of large amount of digital data has ever been a challenge. Digital Image or Multimedia Data, consisting of relatively higher number of bytes as compared to other documents, often falls in trouble while being used in networked computing. Therefore, compression of digital image deserves more importance than the simple documents do. Although, the storage devices are offering huge capacity nowadays, bandwidth of a network is not being increased in that proportion. Thus, storing a digital image in a large capacity storage device may consider compression less important, but transmission of a digital image over a network must yet require the image in compressed format. Again, for today’s heterogeneous network structure; common, easy and less-time-consuming compression-decompression (CODEC) technique is essential that is simple and completely lossless. To meet all these demands, we modify a spatial domain lossless image data compression method that uses simple arithmetic operations in order to reduce the coding redundancy of a digital image. After a careful exploration of the focused lossless image compression method and finding out its failure case, we also took its existing improvements into consideration and revealed their limitations. Then, in this paper, we present a modified approach for lossless image compression in spatial domain addressing Run Length Encoding (RLE) mechanism. The proper inquiry over the focused algorithm and its improvement is carried out throughout this task and application of RLE upon a certain bit-stream of the focused improvement is performed so that more compression ratio is achieved. | |