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## Efficient hybrid image steganography based on pattern matching

**Abdul Qadir**

Hazara University, Pakistan

Steganographic techniques today are widely used for securing secret information. File types like image, audio, video and text are used for hiding secret information using steganographic techniques. A number of steganographic techniques are available in literature in which least significant bit (LSB) techniques are the most common. In this paper a new technique is demonstrated in which most significant bits (MSB) of pixels are taken into account for hiding secret data bit. In this technique secret data bits are arranged in pairs of two and similarly bits representing pixels are also arranged in pairs. For this purpose the 7<sup>th</sup> and 6<sup>th</sup> bits, 6<sup>th</sup> and 5<sup>th</sup> bits, 5<sup>th</sup> and 4<sup>th</sup> bits, 4<sup>th</sup> and 3<sup>rd</sup> bits are arranged to make pairs. The corresponding pairs are numbered as 3<sup>rd</sup> pair (7<sup>th</sup> and 6<sup>th</sup>), 2<sup>nd</sup> pair (6<sup>th</sup> and 5<sup>th</sup>), 1<sup>st</sup> pair (5<sup>th</sup> and 4<sup>th</sup>) and 0<sup>th</sup> pair (4<sup>th</sup> and 3<sup>rd</sup>). For each embedding the secret data bits pair is compared with the pairs of pixel bits and embedding is done on the basis of similarity between pairs. If no similarity is found in pairs then secret data pairs is embedded in 0<sup>th</sup> pair of pixel bits. The proposed technique ensures significant signal to noise ratio and is more secure than the existing techniques as the attackers mostly target the least significant bits of pixel for extracting secret information and focuses less on most significant bits.

### Biography

Abdul Qadir has received his Master of Computer Science Degree from Comsats Institute of Information Technology Abbottabad, Pakistan in 2004 and is currently enrolled in MS (CS) at the Department of Information Technology Hazara University, Pakistan. He is also serving as a Visiting Lecturer in IT Department Hazara University Garden Campus Mansehra, Pakistan. His research interests include image processing, network security and computer networks.

[moonworldcall@gmail.com](mailto:moonworldcall@gmail.com)

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