# Robust reversible watermarking scheme based on wavelet-like transform

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**Abstract:**

Watermarking reversibility is one of the basic requirements for medical imaging, military imaging, and remote sensing applications. In these fields a slight change in the original image can lead to a significant difference in the final decision making process. However, the reversibility alone is not enough for practical applications because the hidden data must be extracted even after unintentional attacks (e.g., noise addition, JPEG compression) so a robust (i.e., semi-fragile) reversible watermarking methods became required. In this paper, we present a new robust reversible watermarking method that utilizes the Slantlet transform (SLT) to transform image blocks and modifying the SLT coefficients to embed the watermark bits. If the watermarked image is not attacked, the method is completely reversible (i.e., the watermark and the original image will be recovered correctly). After JPEG compression, the hidden data can be extracted without error. Experimental results prove that the

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presented scheme achieves high visual quality, complete reversibility, and better robustness in comparison with the previous methods.

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