A Removable Visible Watermark for Digital Images

Chin-Chen Chang1,3, Chia-Chen Lin2, *, and Kuan-Ming Li3

1 Department of Information Engineering and Computer Science,
Feng Chia University,
Taichung 40724, Taiwan, ROC
ccc@cs.ccu.edu.tw

2 Department of Computer Science and Information Management,
Providence University,
Taichung 43301, Taiwan, ROC
mhlin3@pu.edu.tw

3 Department of Computer Science and Information Engineering,
National Chung Cheng University,
Chiayi 621, Taiwan, ROC
lkm94@cs.ccu.edu.tw

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Abstract. Visible watermarking schemes are among the techniques being used to protect intellectual property rights (IPRs). To provide authorized users better visibility, a new research issue called removable visible watermarking has been proposed recently. In this paper, an enhancement of Huang and Tang’s scheme is proposed to achieve removability. Authorized users can simply remove an embedded watermark by using the received secret stream to reconstruct the original image. However, malicious users can only obtain reconstructed images by using blind guessing, and those will be of poor image quality. The experimental results confirm that the difference in image quality generated by unauthorized and authorized users can range up to 19 dB. Furthermore, the secret stream for reconstructing the original image in our scheme can be shortened to 192 bytes by using our proposed secret stream shortening algorithm.

Keywords: Removable visible watermark, vector quantization

References


*Correspondence author

