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A ROBUST WATERMARKING ALGORITHM BASED ON TWO DIMENSIONAL CELLULAR AUTOMATA

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Abstract

With the rapid development of communications and the growth and popularity of multimedia. Digital contents can be easily transferred between any two nodes, changed or attacked. Therefore, the necessity of copyright, authorization, cryptography of digital contents is considered as important issue. Digital watermarking technique is introduced to solve these problems. Cellular automata is a decentralized model that used for computing and providing an excellent platform to run a complex computation based on local information. A novel watermarking scheme based on chaotic CA is proposed. Our method is performed by scattering and scrambling the LSB of watermark image into the original one. The experimental results prove that chaotic characteristic of CA are effective in image watermarking because the PSNR and NC operators give us best results.

Keywords : Two Dimensional Cellular Automata, Game-of-Life, Image Watermarking, Automata, Robust

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