Abstract

Information technology developing rapidly as the need of fast data exchange increase. But since every people can copy, edit or even admit data of other person as his, there rise new issue about the belonging and copyright of data, counterfeit data, and illegal editting. One of many technicque that can be used to solve these issue is watermarking.

Many watermarking method that had been developed for many purpose. R*eversible watermarking by difference expansion with spatial quads domain* is an example. This method using difference between adjacent pixels in quad vector to embed bits of watermark label. The advantage of this method is it's ability to restore the host image after extraction exactly the same as the host image before embedding process. With this advantage, an image can be watermarked many times and still can be restored perfectly. The other characteristic of this method is robustness of the watermark label is very low. Slight distortion in watermarked image can make the watermark label can not be identified anymore. For Extraction process, this method needs location map and key. The size of location map is very large that can make the watermarked image quality lower. If the location map is disabled then the amount of bits that will be embedded decrease so the invisibility of the watermarked image will increase. This method is suitable to be applied for content authentification since this method has these characteristic.

Kata kunci: reversible difference expansion, reversible watermarking, bitmap, least significant bits (LSB), domain spatial.