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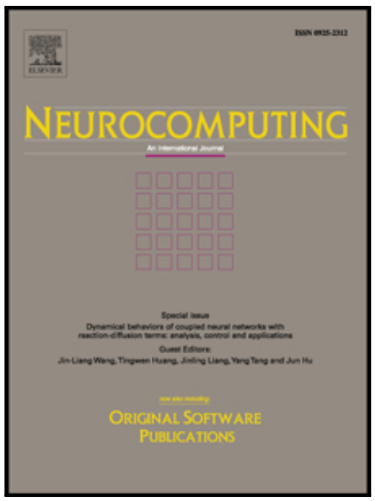

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Perceptual Information Hiding Based on Multi-channel Visual Masking

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Abstract

Informaiton security, the practice to protect information from unauthorized use, attracts researchers attention. In this paper, we proposed a visual masking effect based perceptual information protection scheme for display devices, such as mobile device, personal computer and ATM machine. The private information is embedded into the misleading image with the proposed algorithm, resulting in a dramatic descent in perceptual saliency of the private information for peepers viewing with naked eyes, while maintaining accessibility for autherised viewers wearing color filter. Quantitive and qualitive experiments are conducted, and results show effectiveness of our algorithm.

Keywords: information security, watermark, authentication, visual masking, human visual system

1. Introduction

Information security, by definition, is the practice of defending information from unautherized access, use, disclosure, disruption, modification, inspection, recording or destruction. Nowadays, plenty of image contents are produced every day, people are more concerned about protecting their information from being peeped by others in public area. For the problem of information protection,

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