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- The Fourth International Conference on the Networked Digital Technologies (NDT 2012)
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Editorial

Steganography has been widely researched in literature with different applications and platforms. Steganography is attempted in a piece of research by *Nedal Kafri* and *Hani Suleiman* with a new method based on embedding message bits in the 4th bit of the coefficients of a transform domain, such as the discrete cosine transform (DCT) and Wavelet, of an image. In their paper on '**Spatial Domain Steganography Using Bit- 4 of DCT Coefficients**', they have introduced the technique that utilized the idea of SSB-4 technique in modifying the other bits (i.e., 1st, 2nd, 3rd and/or 5th), to obtain the minimum variation between the original and the modified coefficient. The authors claim that the approach is unique and characterized with robustness and provide better resistance against compression and steganalysis processes. The experimental data support the method with acceptable results which proves efficiency.

Arash Ashtari Nakhaie and *Shahriar Baradaran Shokouhi* in their paper on "**No Reference Medical Image Quality Measurement Based on Spread Spectrum and Discrete Wavelet Transform using ROI Processing**" proposed a new No-Reference (NR) objective quality measurement method based on spread spectrum technique and discrete wavelet transform using ROI processing. They have divided the original image into two separate sub-images called ROI and non-ROI. They used the spread spectrum embedding algorithm to embed a binary mark into DCT transform of non-ROI part of image. They have evaluated the performance of the method by calculating MSE and PSNR (of original and extracted mark) and measuring their correlation with degradation of the whole image. The evidences are promising as the applications of this work could be compression and storage of images with an acceptable quality level, or compression and transmission over a network for telemedicine applications while preserving an appropriate quality level, the authors claimed.

Vahid Alirezaei in a paper on '**Efficient video encryption by image key based on hyper-chaos system**' has constructed an efficient video encryption scheme by image key and is based on hyper-chaos system. By iterating chaotic maps they have created, the generated pseudorandom sequences obtain high initial-value sensitivity and good randomness. Both theoretical analysis and experimental results show that the scheme has good cryptographic security and perceptual security, and it does not affect the compression efficiency apparently.

In the last paper on '**Location Finding in Wireless Sensor Network Based on Soft Computing Methods**', *Seyed Mohammad Nekooei* and *Manzuri-Shalmani* used the received signal strength for finding location in the wireless sensor network. In the current study, the authors have used the, genetic fuzzy and neuro - fuzzy methods to get more accurate localization. They have examined the enhanced localization algorithms in different environmental noises.

With this issue, we have completed the publication of the second volume of the **Journal of Information Security Research**. We predict good amount of research in the future issues as security is the major issue in the current information society.

Editors