

Digital Forgery Detection by Signal Noise Inconsistency

Authors : Bo Liu, Chi-Man Pun

Abstract : A novel technique for digital forgery detection by signal noise inconsistency is proposed in this paper. The forged area spliced from the other picture contains some features which may be inconsistent with the rest part of the image. Noise pattern and the level is a possible factor to reveal such inconsistency. To detect such noise discrepancies, the test picture is initially segmented into small pieces. The noise pattern and level of each segment are then estimated by using various filters. The noise features constructed in this step are utilized in energy-based graph cut to expose forged area in the final step. Experimental results show that our method provides a good illustration of regions with noise inconsistency in various scenarios.

Keywords : forgery detection, splicing forgery, noise estimation, noise

Conference Title : ICBB 2015 : International Conference on Bioinformatics and Biomedicine

Conference Location : Istanbul, Türkiye

Conference Dates : May 21-22, 2015