Conditional Probability based Digital Media Source Identification

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Abstract

Digital media become more frequently exhibited either directly or indirectly in court as an evidence to relate the suspects and the criminals. However, the manipulation of digital evidence is also made simple with easily available processing tools. This is where the role of digital forensics becomes important. To ensure the validity of the evidence, digital forensics helps by providing essential information about the evidence such as the source of the media. In our work, we propose a media source identification algorithm based on the conditional probability features (called CP features). This new technique works on 72 features extracted from individual media for the purpose of classification. Through experiments based on standard benchmarks, comparable classification accuracies have been achieved by this new approach.