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Image clustering based on camera fingerprints

Chang-Tsun Li

Department of Computer Science
University of Warwick

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Abstract: It is a desirable functionality for the forensic investigators to be able to establish relationship among images in order to narrow down their investigations. This talk is concerned with a clustering method for grouping digital images so that each resultant group contains only images taken by the same camera. The past decade has seen the use of sensor pattern noise (SPN) extracted from digital images as camera 'fingerprint' for connecting images to the cameras responsible for their creation. Digital cameras rely on sensors (made of semiconductor) to create images. The manufacturing process of the semi-conductor is not perfect and the imperfection is reflected as invisible noise in the images when they are taken by the cameras. Because the manufacturing imperfection is non-uniform, sensors divided from the same wafer leave unique SPN in images, allowing the SPN to be used as unique camera fingerprint.

More info: http://www2.warwick.ac.uk/fac/sci/wcpm/seminars

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