

(54) Title of the invention : IMAGE FORENSIC FOR FORGERY DETECTION IN DIGITAL IMAGE COPY AND MOVE

(51) International classification :G06K0009620000, G06T0001000000, B42D0025300000,
G06T0007110000, G01N0001300000

(86) International Application No :PCT//
Filing Date :01/01/1900

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

(71)Name of Applicant :
1)St. Martin's Engineering College
Address of Applicant :St.Martin's Engineering College, Dhulapally Kompally Secunderabad -----

Name of Applicant : NA
Address of Applicant : NA

(72)Name of Inventor :
1)Dr. R. Santhoshkumar Associate Professor and Head, CSE
Address of Applicant :St.Martin's Engineering College, Dhulapally Kompally Secunderabad -----
-

2)Dr. K. Srinivas Associate Professor, CSE
Address of Applicant :St.Martin's Engineering College, Dhulapally Kompally Secunderabad -----
-

3)Dr. G. Govinda Rajulu Professor, CSE
Address of Applicant :St.Martin's Engineering College, Dhulapally Kompally Secunderabad -----
-

4)Dr. Sanjay Kumar Suman Professor ECE and Dean R&D
Address of Applicant :St.Martin's Engineering College, Dhulapally Kompally Secunderabad -----
-

5)Dr. P Santosh Kumar Patra Professor, Dept. of CSE
Address of Applicant :St.Martin's Engineering College, Dhulapally Kompally Secunderabad -----
-

6)C. Avinash Assistant Professor, CSE
Address of Applicant :St.Martin's Engineering College, Dhulapally Kompally Secunderabad -----
-

7)K. Yashwanth Student CSE
Address of Applicant :St.Martin's Engineering College, Dhulapally Kompally Secunderabad -----
-

8)Prasham Kumar Student CSE
Address of Applicant :St.Martin's Engineering College, Dhulapally Kompally Secunderabad -----
-

9)K. Sowmya Bhavani, Student CSE
Address of Applicant :St.Martin's Engineering College, Dhulapally Kompally Secunderabad -----
-

10)D. Sai Krishna Rithesh, Student CSE
Address of Applicant :St.Martin's Engineering College, Dhulapally Kompally Secunderabad -----
-

11)Naresh Kumar, Student, CSE
Address of Applicant :St.Martin's Engineering College, Dhulapally Kompally Secunderabad -----
-

12)E. Srinidhi, Student, CSE
Address of Applicant :St.Martin's Engineering College, Dhulapally Kompally Secunderabad -----
-

13)Anthrappu Adarsh Student CSE
Address of Applicant :St.Martin's Engineering College, Dhulapally Kompally Secunderabad -----
-

14)Athikam Anuhya, Student, CSE
Address of Applicant :St.Martin's Engineering College, Dhulapally Kompally Secunderabad -----
-

15)Tunk Nagaraz Student CSE
Address of Applicant :St.Martin's Engineering College, Dhulapally Kompally Secunderabad -----
-

(57) Abstract :

In recent years, digital image forgery detection has become an active research area due to the advancement of photo editing software. This invention focuses on passive forgery detection on images tampered using copy move technique, better known as Copy Move Forgery Detection (CMFD). A CMFD technique consisting of oriented Features from Accelerated Segment Test and rotated Binary Robust Independent Elementary Features (Oriented FAST and rotated BRIEF) as the feature extraction method and 2 Nearest Neighbor (2NN) with Hierarchical Agglomerative Clustering (HAC) as the feature matching method is proposed. Evaluation of the proposed CMFD technique was performed on images that underwent various geometrical attacks. With the proposed technique, an overall accuracy rate of 84.33% and 82.79% are obtained for evaluation carried out with images from the MICC-F600 and MICC-F2000 databases. Forgery detection achieved True Positive Rate of more than 91% for tampered images with object translation, different degree of rotation and enlargement.

No. of Pages : 14 No. of Claims : 5