

(12) PATENT APPLICATION PUBLICATION

(21) Application
No.202041007012 A

(19) INDIA

(22) Date of filing of Application :19/02/2020

(43) Publication Date :
28/02/2020

(54) Title of the invention : LIGHT ESTIMATOR BASED FORGERY CONTROL UNIT FOR IMAGE FORGERY DETECTION

(51)
International :H04N0001000000,G06Q0030000000,G06F0003048800,G06T0001000000,G06K0009000000
classification

(31) Priority
Document :NA
No

(32) Priority
Date :NA

(33) Name
of priority :NA
country

(86)
International
Application :NA
No :NA

Filing
Date

(87)
International
Publication : NA
No

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

Filing
Date

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

(71)Name of Applicant
:

1)**R.Cristin**
Address of
Applicant :Assistant
Professor, Department
of CSE, GMR Institute
of Technology, Rajam,
Andhra Pradesh -
532127 Andhra Pradesh
India

2)**C. Priya**
3)**S Vairamuthu**
4)**Binu Dennis**
5)**Rajakumar B. R.**

(72)Name of Inventor :

1)**R.Cristin**
2)**C. Priya**
3)**S Vairamuthu**
4)**Binu Dennis**
5)**Rajakumar B. R.**

(57) Abstract :

The present invention discloses the light estimator based forgery control unit for image forgery detection, wherein the system comprises smart phone. The system of the present invention is to estimate the light based on the forgery control unit. The architecture of the present invention is inbuilt within the smart phone, which comprises the download manager, storage unit, application processor, communication unit, and display unit along with the proposed forgery control unit. The forgery control unit present in the smart phone includes the image reader, light estimator, section matcher, and flag generator which undergoes the process of reading the image, estimating the light coefficients, matching the segmented sections, and finally, generating the flag for the required images. [To be published with Figure.1]

No. of Pages : 12 No. of Claims : 6



Office of the Controller General of Patents, Designs & Trade Marks
 Department of Industrial Policy & Promotion,
 Ministry of Commerce & Industry,
 Government of India

(<http://ipindia.nic.in/index.htm>)



(<http://ipindia.nic.in/index.htm>)

Application Details	
APPLICATION NUMBER	202041007012
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	19/02/2020
APPLICANT NAME	1 . R.Cristin 2 . C. Priya 3 . S Vairamuthu 4 . Binu Dennis 5 . Rajakumar B. R.
TITLE OF INVENTION	LIGHT ESTIMATOR BASED FORGERY CONTROL UNIT FOR IMAGE FORGERY DETECTION
FIELD OF INVENTION	ELECTRONICS
E-MAIL (As Per Record)	rcristin54@gmail.com
ADDITIONAL-EMAIL (As Per Record)	cristin.r@gmrit.edu.in
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	03/03/2020
PUBLICATION DATE (U/S 11A)	28/02/2020
REPLY TO FER DATE	31/01/2022

Application Status



Office of the Controller General of Patents, Designs & Trade Marks
Department of Industrial Policy & Promotion,
Ministry of Commerce & Industry,
Government of India

(<http://ipindia.nic.in/index.htm>)



(<http://ipindia.nic.in/index.htm>)

Document Name	Created Date/Uploaded Date
202041007012-ABSTRACT [31-01-2022(online)].pdf	31/01/2022
202041007012-CLAIMS [31-01-2022(online)].pdf	31/01/2022
202041007012-COMPLETE SPECIFICATION [31-01-2022(online)].pdf	31/01/2022
202041007012-DRAWING [31-01-2022(online)].pdf	31/01/2022
202041007012-FER_SER_REPLY [31-01-2022(online)].pdf	31/01/2022
202041007012-FER.pdf	18/10/2021
202041007012-FORM 18 [03-03-2020(online)].pdf	03/03/2020
202041007012-ENDORSEMENT BY INVENTORS [24-02-2020(online)].pdf	24/02/2020
202041007012-COMPLETE SPECIFICATION [19-02-2020(online)].pdf	19/02/2020
202041007012-DRAWINGS [19-02-2020(online)].pdf	19/02/2020
202041007012-FIGURE OF ABSTRACT [19-02-2020(online)].jpg	19/02/2020
202041007012-FORM 1 [19-02-2020(online)].pdf	19/02/2020
202041007012-FORM 3 [19-02-2020(online)].pdf	19/02/2020
202041007012-FORM-9 [19-02-2020(online)].pdf	19/02/2020
202041007012-STATEMENT OF UNDERTAKING (FORM 3) [19-02-2020(online)].pdf	19/02/2020

“FORM 1				(FOR OFFICE USE ONLY)	
THE PATENTS ACT 1970 (39 of 1970) and THE PATENTS RULES, 2003 APPLICATION FOR GRANT OF PATENT (See section 7, 54 and 135 and sub-rule (1) of rule 20)					
		Application No.			
		Filing date:			
		Amount of Fee paid:			
		CBR No:			
		Signature:			
1. APPLICANT'S REFERENCE / IDENTIFICATION NO. (AS ALLOTTED BY OFFICE)					
2. TYPE OF APPLICATION [Please tick (✓) at the appropriate category]					
Ordinary (✓)		Convention ()		PCT-NP ()	
Divisional ()	Patent of Addition ()	Divisional ()	Patent of Addition ()	Divisional ()	Patent of Addition ()
3A. APPLICANT(S)					
Name in Full		Nationality	Country of Residence	Address of the Applicant	
R.Cristin		Indian	India	Assistant Professor, Department of CSE, GMR Institute of Technology, Rajam, Andhra Pradesh - 532127	
C. Priya		Indian	India	Associate Professor, School of Computing Science, Department of Information Technology, Vels Institute of Science, Technology and Advanced Studies (VISTAS), Pallavaram, Chennai 600 117., Tamil Nadu	
S Vairamuthu		Indian	India	Associate Professor, Department of Software Systems, School of Computer Science and Engineering , Vellore Institute of Technology (VIT) ,Katpadi. Vellore - 632014,Tamil Nadu	
Binu Dennis		Indian	India	Resbee Info Technologies (P) Ltd, 3-207-18E, Perumal Nagar II Ananthan Nagar, Asaripallam Tamil Nadu, India, 629201	
Rajakumar B. R.		Indian	India	Resbee Info Technologies (P) Ltd, 3-207-18E, Perumal Nagar II Ananthan Nagar, Asaripallam Tamil Nadu, India, 629201	
3B. CATEGORY OF APPLICANT [Please tick (✓) at the appropriate category]					
Natural Person (✓)		Other than Natural Person			
		Small Entity ()	Startup()	Others ()	

4. INVENTOR(S) [Please tick (✓) at the appropriate category]					
Are all the inventor(s) same as the applicant(s)		Yes (✓)		No ()	
If "No", furnish the details of the inventor(s)					
Name in Full		Nationality	Country of Residence	Address of the Inventor	
				House No.	
				Street	
				City	
				State	
				Country	
				Pin code	
5. TITLE OF THE INVENTION					
LIGHT ESTIMATOR BASED FORGERY CONTROL UNIT FOR IMAGE FORGERY DETECTION					
6. AUTHORISED REGISTERED PATENT AGENT(S)			IN/PA No.		
			Name		
			Mobile No.		
7. ADDRESS FOR SERVICE OF APPLICANT IN INDIA			Name	R.Cristin	
			Postal Address	Assistant Professor, Department of CSE, GMR Institute of Technology, Rajam, Andhra Pradesh - 532127	
			Mobile No.	9095051375	
			E-mail ID	rcristin54@gmail.com, cristin.r@gmrit.edu.in	
8. IN CASE OF APPLICATION CLAIMING PRIORITY OF APPLICATION FILED IN CONVENTION COUNTRY, PARTICULARS OF CONVENTION APPLICATION					
Country	Application Number	Filing date	Name of the applicant	Title of the invention	IPC (as classified in the convention country)
9. IN CASE OF PCT NATIONAL PHASE APPLICATION, PARTICULARS OF INTERNATIONAL APPLICATION FILED UNDER PATENT CO-OPERATION TREATY (PCT)					
International application number			International filing date		
10. IN CASE OF DIVISIONAL APPLICATION FILED UNDER SECTION 16, PARTICULARS OF ORIGINAL (FIRST) APPLICATION					
Original (first) application No.			Date of filing of original (first) application		
11. IN CASE OF PATENT OF ADDITION FILED UNDER SECTION 54, PARTICULARS OF MAIN APPLICATION OR PATENT					
Main application/patent No.			Date of filing of main application		
12. DECLARATIONS					
(i) Declaration by the inventor(s)					
(In case the applicant is an assignee: the inventor(s) may sign herein below or the applicant may upload the assignment or enclose the assignment with this application for patent or send the assignment by post/electronic transmission duly authenticated within the prescribed period).					

I/We, the above named inventor(s) is/are the true & first inventor(s) for this Invention and declare that the applicant(s) herein is/are my/our assignee or legal representative.

(a) Date

(b) Signature(s)

(c) Name(s)

(ii) Declaration by the applicant(s) in the convention country

~~(In case the applicant in India is different than the applicant in the convention country:~~ the applicant in the convention country may sign herein below or applicant in India may upload the assignment from the applicant in the convention country or enclose the said assignment with this application for patent or send the assignment by post/electronic transmission duly authenticated within the prescribed period)

I/We, the applicant(s) in the convention country declare that the applicant(s) herein is/are my/our assignee or legal representative.

(a) Date

(b) Signature(s)

(c) Name(s) of the signatory

(iii) Declaration by the applicant(s)

I/We the applicant(s) hereby declare(s) that: -

- I am/ We are in possession of the above-mentioned invention.
- The ~~provisional~~/complete specification relating to the invention is filed with this application.
- The invention as disclosed in the specification uses the biological material from India and the necessary permission from the competent authority shall be submitted by me/us before the grant of patent to me/us.
- There is no lawful ground of objection(s) to the grant of the Patent to me/us.
- I am/we are the true & first inventor(s).
- I am/we are the assignee or legal representative of true & first inventor(s).
- The application or each of the applications, particulars of which are given in Paragraph-8, was the first application in convention country/countries in respect of my/our invention(s).
- I/We claim the priority from the above mentioned application(s) filed in convention country/countries and state that no application for protection in respect of the invention had been made in a convention country before that date by me/us or by any person from which I/We derive the title.
- My/our application in India is based on international application under Patent Cooperation Treaty (PCT) as mentioned in Paragraph-9.
- The application is divided out of my /our application particulars of which is given in Paragraph-10 and pray that this application may be treated as deemed to have been filed on DD/MM/YYYY under section 16 of the Act.
- The said invention is an improvement in or modification of the invention particulars of which are

given in Paragraph-11.

13. FOLLOWING ARE THE ATTACHMENTS WITH THE APPLICATION

(a) Form 2

Item	Details	Fee	Remarks
Complete/provisional specification)#	No. of pages --7	1600	
No. of Claim(s)	No. of claims and No. of pages --6 and 1		
Abstract	No. of pages --1		
No. of Drawing(s)	No. of drawings and No. of pages --3 and 3		

In case of a complete specification, if the applicant desires to adopt the drawings filed with his provisional specification as the drawings or part of the drawings for the complete specification under rule 13(4), the number of such pages filed with the provisional specification are required to be mentioned here.

~~(b) Complete specification (in conformation with the international application)/as amended before the International Preliminary Examination Authority (IPEA), as applicable (2 copies).~~

~~(c) Sequence listing in electronic form~~

~~(d) Drawings (in conformation with the international application)/as amended before the International Preliminary Examination Authority (IPEA), as applicable (2 copies).~~

~~(e) Priority document(s) or a request to retrieve the priority document(s) from DAS (Digital Access Service) if the applicant had already requested the office of first filing to make the priority document(s) available to DAS.~~

~~(f) Translation of priority document/Specification/International Search Report/International Preliminary Report on Patentability.~~

~~(g) Statement and Undertaking on Form 3~~

~~(h) Declaration of Inventorship on Form 5~~

~~(i) Power of Authority~~

~~(j).....~~

~~Total fee ₹.....in Cash/ Banker's Cheque /Bank Draft bearing No.....~~

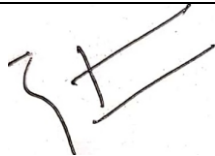
~~Date.....on~~

~~..... Bank.~~

I/We hereby declare that to the best of my/our knowledge, information and belief the fact and matters slated herein are correct and I/We request that a patent may be granted to me/us for the said invention.

Dated this 19th day of February 2020

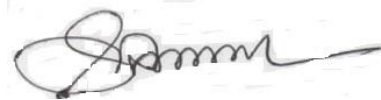
Signature:



Name: R.Cristin



C. Priya



S Vairamuthu



Binu Dennis



Rajakumar B.R

To,
The Controller of Patents
The Patent Office, at Chennai

Note: -

*Repeat boxes in case of more than one entry.

*To be signed by the applicant(s) or by authorized registered patent agent otherwise where mentioned.

*Tick (✓)/cross (x) whichever is applicable/not applicable in declaration in paragraph-12.

*Name of the inventor and applicant should be given in full, family name in the beginning.

*Strike out the portion which is/are not applicable.

*For fee: See First Schedule”;

FORM 5

THE PATENT ACT, 1970
(39 of 1970)
&
THE PATENTS RULES, 2003

DECLARATION AS TO INVENTORSHIP

[See section 10(6) and rule 13(6)]

1. NAME OF APPLICANT (S)

R.Cristin, C. Priya, S Vairamuthu, Binu Dennis, Rajakumar B. R.,

hereby declare that the true and first inventor(s) of the invention disclosed in the complete specification filed in pursuance of my/our application numbered **202041007012** dated **24/02/2020** is/are

2. INVENTOR(S)

Name in Full	Nationality	Country of Residence	Address of the Applicant
R.Cristin	Indian	India	Assistant Professor, Department of CSE, GMR Institute of Technology, Rajam, Andhra Pradesh - 532127
C. Priya	Indian	India	Associate Professor, School of Computing Science, Department of Information Technology, Vels Institute of Science, Technology and Advanced Studies (VISTAS), Pallavaram, Chennai 600 117., Tamil Nadu
S Vairamuthu	Indian	India	Associate Professor, Department of Software Systems, School of Computer Science and Engineering , Vellore Institute of Technology (VIT) ,Katpadi. Vellore - 632014,Tamil Nadu
Binu Dennis	Indian	India	Resbee Info Technologies (P) Ltd, 3-207-18E, Perumal Nagar II, Ananthan Nagar, Asaripallam Tamil Nadu, India, 629201
Rajakumar B. R.	Indian	India	Resbee Info Technologies (P) Ltd, 3-207-18E, Perumal Nagar II, Ananthan Nagar, Asaripallam Tamil Nadu, India, 629201

Dated this. 24th Day of February, 2020

R.Cristin

C. Priya

S Vairamuthu

Binu Dennis

Rajakumar B.R

**Signature
Name of the signatory**

3. ~~DECLARATION TO BE GIVEN WHEN THE APPLICATION IN INDIA IS FILED BY THE APPLICANT(S) IN THE CONVENTION COUNTRY:--~~

We the applicant(s) in the convention country hereby declare that our right to apply for a patent in India is by way of assignment from the true and first inventor(s).

Signature

Name of the signatory

4. ~~STATEMENT~~ (to be signed by the additional inventor(s) not mentioned in the application form)

I/We assent to the invention referred to in the above declaration, being included in the complete specification filed in pursuance of the stated application.

Dated this..... day of

Signature of the additional inventor(s)

Name

To,
The Controller of Patents,
The Patent Office, at **Chennai**