

(54) Title of the invention : A NOVEL DISINFECTING MACHINE FOR A PORTABLE OBJECT

<p>(51) International classification :A61L0002100000, A61L0002180000, A61L0002220000, A61L0011000000, A41D0013110000</p> <p>(31) Priority Document No :NA (32) Priority Date :NA (33) Name of priority country :NA (86) International Application No :NA Filing Date :NA (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</p>	<p>(71)Name of Applicant :</p> <p>1)Dr.Chabi Gupta Address of Applicant :Assistant Professor, School of Commerce, Finance and Accountancy, Christ(Deemed-to-be University) Delhi-NCR Mail id : chabi.gupta@christuniversity.in Mobile No : 9891522880 Delhi India</p> <p>2)Dr.K.Venkatesh Guru 3)Nirmala Gandhi.J 4)JEYA DAISY I 5)S. Saravanakumar 6)Dr. P.Hosanna Princye 7)Dr. V. DINESH KUMAR 8)Dr. V. Tamilselvan 9)Dr. S. Siva Subramanian 10)Maheshkumar N 11)Dr.Md.Musthak 12)Dr.N.Bagyalakshmi 13)V. Manimekalai 14)Mrs.R.R.Rubia Gandhi</p> <p>(72)Name of Inventor :</p> <p>1)Dr.Chabi Gupta 2)Dr.K.Venkatesh Guru 3)Nirmala Gandhi.J 4)JEYA DAISY I 5)S. Saravanakumar 6)Dr. P.Hosanna Princye 7)Dr. V. DINESH KUMAR 8)Dr. V. Tamilselvan 9)Dr. S. Siva Subramanian 10)Maheshkumar N 11)Dr.Md.Musthak 12)Dr.N.Bagyalakshmi 13)V. Manimekalai 14)Mrs.R.R.Rubia Gandhi</p>
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(57) Abstract :

Microorganisms are the main reason for spreading diseases when a person is in close contact and also spreads in the form of droplets when an infected person coughs, sneezes or talks. The droplets may also be formed through breathing and speaking. People may also become infected by the microorganisms by touching a dirty surface and then their face or eyes. Infections due to bacteria and viruses normally spread over daily utilized objects. Mainly electronic devices play a major role in human day to day life and often we deal with that such as TV remote, mobile phone and some electronic products. Therefore, microorganisms like viruses and bacteria survive on the surfaces of these daily utilized objects for a much longer time. Coronaviruses also kind of spreading viruses mainly caused due to touching infected persons or through persons droplets or through touching infected person used objects. As per reason scientific report, viruses such as COVID-19 can stay active up to 72 hours on certain objects and surfaces. This invention brings an effective disinfecting device for portable object during the pandemic situations. This device made up of housing having housing, central cavity, first panel, worm and worm wheel mechanisms etc., to provide an effective disinfecting device.

No. of Pages : 11 No. of Claims : 3

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PUBLICATION OF THE PATENT OFFICE

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202141011050 A

(19) INDIA

(22) Date of filing of Application :16/03/2021

(43) Publication Date : 26/03/2021

(54) Title of the invention : A FAULT TOLERANCE SOLUTION FOR LARGE SCALE WIRELESS SENSOR NETWORKS IN THE CONTEXT OF A PRECISION AGRICULTURE APPLICATION

<p>(51) International classification</p> <p>(31) Priority Document No</p> <p>(32) Priority Date</p> <p>(33) Name of priority country</p> <p>(86) International Application No Filing Date</p> <p>(87) International Publication No</p> <p>(61) Patent of Addition to Application Number Filing Date</p> <p>(62) Divisional to Application Number Filing Date</p>	<p>:H04W0084180000, G06F0011070000, H04W0040220000, G06F0011140000, H04W0016180000</p> <p>:NA</p> <p>:NA</p> <p>:NA</p> <p>:NA</p> <p>:NA</p> <p>: NA</p> <p>:NA</p> <p>:NA</p> <p>:NA</p> <p>:NA</p> <p>:NA</p>	<p>(71)Name of Applicant :</p> <p>1)Dr. P. VIJAYALAKSHMI Address of Applicant :PROFESSOR, DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING, HINDUSTHAN COLLEGE OF ENGINEERING & TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, OTHAKKALMANDAPAM POST, COIMBATORE - 641 032, TAMILNADU, INDIA. Tamil Nadu India</p> <p>2)Dr. J. NITHYA</p> <p>3)Dr. J. RAMYA</p> <p>4)Dr. K. MATHAN</p> <p>5)Ms. A. REYANA</p> <p>6)Mr. KRISHNAPRASATH.T</p> <p>7)Mrs. T. NIVETHITHA</p> <p>8)Mrs. R. VANITHA</p> <p>9)Mr. P. SURESH KUMAR</p> <p>10)Ms. B. AMBIKA</p> <p>(72)Name of Inventor :</p> <p>1) Dr. P. VIJAYALAKSHMI</p> <p>2)Dr. J. NITHYA</p> <p>3)Dr. J. RAMYA</p> <p>4)Dr. K. MATHAN</p> <p>5)Ms. A. REYANA</p> <p>6)Mr. KRISHNAPRASATH.T</p> <p>7)Mrs. T. NIVETHITHA</p> <p>8)Mrs. R. VANITHA</p> <p>9)Mr. P. SURESH KUMAR</p> <p>10)Ms. B. AMBIKA</p>
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(57) Abstract :

In this work, we have proposed a fault tolerance solution for Large-scale wireless sensor arrays in the context of a precision agriculture application. We first proposed a scenario for the deployment of AWSNs for this application using thousands of sensor nodes and relay nodes. These the latter are deployed so as to form regular hexagons. Then, we proposed the SFR-RNR solution (Simultaneous Failure Recovery based on Relay Node Relocation) for the resolution of this problem. This solution uses a redeployment strategy of a number of relay nodes in the damaged area so as to restore connectivity and partially the cover. Finally, we evaluated the performance of our approach proposed by simulation. The performance results associated with our large-scale solution show that the number of relay nodes redeployed following the occurrence of a failure is slightly influenced by the extent of the damaged area. This shows that our solution fits fine to large networks.

No. of Pages : 26 No. of Claims : 9

FORM 2
THE PATENT ACT 1970
(39 of 1970)
&
The Patents Rules, 2003
PROVISIONAL/COMPLETE SPECIFICATION
(See Section 10 and Rule 13)



COMPLETE

**A NEW DEPICTION OF WATER PATH FOR POWER GENERATION
FROM WASTE WATER AS WELL AS OIL**

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The following specification particularly describes the invention
and the manner in which it is to be performed

(54) Title of the invention : IMPROVEMENTS TO THE CLONALG ALGORITHM AND THEIR COMPARISONS ON THE DIAGNOSIS OF BREAST CANCER

<p>(51) International classification</p> <p>(31) Priority Document No</p> <p>(32) Priority Date</p> <p>(33) Name of priority country</p> <p>(86) International Application No Filing Date</p> <p>(87) International Publication No</p> <p>(61) Patent of Addition to Application Number Filing Date</p> <p>(62) Divisional to Application Number Filing Date</p>	<p>:G06N0003000000, G06K0009660000, G06N0003120000, G16H0050200000, G06Q0010000000</p> <p>:NA</p> <p>:NA</p> <p>:NA</p> <p>:NA</p> <p>: NA</p> <p>:NA</p> <p>:NA</p> <p>:NA</p> <p>:NA</p> <p>:NA</p>	<p>(71)Name of Applicant :</p> <p>1)Dr.P.VIJAYALAKSHMI Address of Applicant :Professor, Department of Electronics And Communication Engineering, Hindusthan College of Engineering & Technology, Valley Campus, Pollachi Highway, Othakkalmandapam, Coimbatore - 641 032, Tamilnadu, India. Tamil Nadu India</p> <p>2)Dr.J.NITHYA</p> <p>3)Dr.J.RAMYA</p> <p>4)Dr.K.MATHAN</p> <p>5)Dr.D.RASI</p> <p>6)Mrs.M.INDRANI</p> <p>7)Dr.P.F.KHALEELUR RAHIMAN</p> <p>8)Mr.D.BASKAR</p> <p>9)Mr.T.ANANDASELVAKARTHIK</p> <p>10)Mrs.N.MENAKA DEVI</p> <p>(72)Name of Inventor :</p> <p>1)Dr.P.VIJAYALAKSHMI</p> <p>2)Dr.J.NITHYA</p> <p>3)Dr.J.RAMYA</p> <p>4)Dr.K.MATHAN</p> <p>5)Dr.D.RASI</p> <p>6)Mrs.M.INDRANI</p> <p>7)Dr.P.F.KHALEELUR RAHIMAN</p> <p>8)Mr.D.BASKAR</p> <p>9)Mr.T.ANANDASELVAKARTHIK</p> <p>10)Mrs.N.MENAKA DEVI</p>
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(57) Abstract :

In this chapter, we are interested in improving a database algorithm in the family of artificial clonal selection algorithms. First, we have started with the presentation of the CLONALG algorithm, and then we mentioned a few remarks which have been observed over the last time, is initialized, and the introduction of random individuals to maintain diversity. Following that, we have presented various solutions to address these remarks. The initialization step in CLONALG, we proposed to create memory cells initials specific to each learning class from local subgroups of these last. Regarding the problem of introducing random cells to the algorithm, we have present three different methods named MF-CLONALG (Median Filter Clonal Algorithm), AC-CLONALG (Average Cells Clonal Algorithm) and VI-CS (Validity Interval Clonal Selection algorithm). Each of these approaches for the goal of creating cells potential memories and preserve diversity in the algorithm without having to discard any cell could be relevant in the following generations. VI-C introduces the concept of the validity interval for a suitable representation of learning classes. The results obtained on the two databases of WDBC and DDSM are better compared to those of CLONALG, the algorithm on which improvements have been made, as well as other classic clonal selection algorithms. The efficiency of the proposed algorithms will improve the learning time be optimized.

No. of Pages : 29 No. of Claims : 5

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(12) PATENT APPLICATION PUBLICATION

(21) Application No.202141006738 A

(19) INDIA

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(43) Publication Date : 26/02/2021

(54) Title of the invention : IOT AND CLOUD BASED LOW-COST SMART IRRIGATION SYSTEM

(51) International classification	:D06F0058380000, A01G0025160000, E04B0001240000, D06F0103100000, G06F0016950000	(71)Name of Applicant : 1)Dr. M. SATHYA Address of Applicant :ASSOCIATE PROFESSOR, DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING, ISLAMIAH INSTITUTE OF TECHNOLOGY, BG ROAD, HULIMAVU, BANGALORE, KARNATAKA, 560076. Karnataka India
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(32) Priority Date	:NA	3)Mr. SAROJ KUMAR
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(57) Abstract :

This invention is an exceptionally ease and an imaginative framework to realize the dampness level of the dirt from a far-off spot. The framework utilizes Arduino UNO, soil dampness sensor for sending information to the cloud and the client. In the proposed brilliant horticultural framework, the specialist centers to defeat the issues in this conventional water system frameworks utilized for farming by actualizing the IoT and cloud. The proposed framework is actualized utilizing four significant segments Microcontroller Aurduino Uno, Soil Moisture level Sensors, Wi-Fi Module, Relay. LCD show and Motor. The dirt dampness level sensors detects the dampness level often and the microcontroller measures the information and sends through the enlisted Wi-Fi module which can get to the web and transfer the information to the cloud in the web administration. This framework works with exceptionally fewer human associations. The homestead factual report can be seen by the rancher whenever on the App, accordingly making ideal use of water for better harvest yield.

No. of Pages : 21 No. of Claims : 8

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Sr. No.	CBR No.	Reference Number / Application Type	Application Number	Title/Remarks	Amount Paid
1	5795	ORDINARY APPLICATION	202141006738	IOT AND CLOUD BASED LOW-COST SMART IRRIGATION SYSTEM	1750
2		E-101/1376/2021-CHE	202141006738	Correspondence	0
3		E-2/543/2021-CHE	202141006738	Form2	0
4		E-3/5547/2021-CHE	202141006738	Form3	0
5		E-5/629/2021-CHE	202141006738	Form5	0
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Date: 18/02/2021

To
The Controller of Patents,
The Patent Office, Chennai
Sub: Submission of Patent Application with Complete Specification

Title: IoT and Cloud based low-cost smart irrigation system

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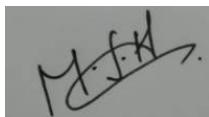
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3. Form- 3
- 4.Form-5
- 5.Form-9

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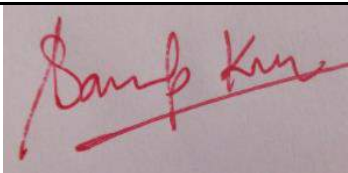
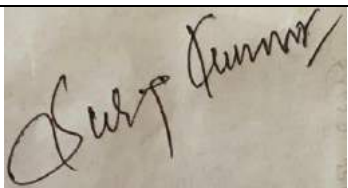
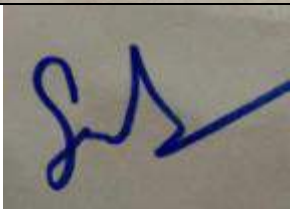
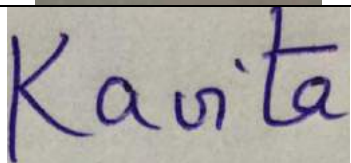

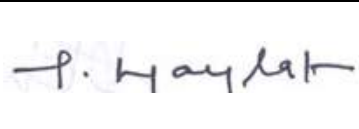
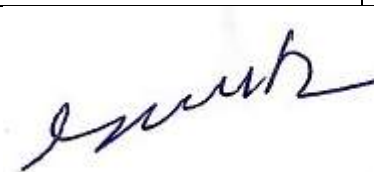
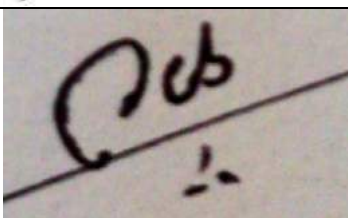
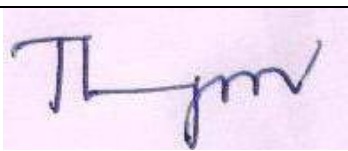


Dr. M SATHYA

"FORM 1 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				(FOR OFFICE USE ONLY)	
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 (x)		PCT-NP (x)	
Divisional ()	Patent of Addition ()	Division ()	Patent of addition ()	Division ()	Patent of Addition ()
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			Country	INDIA
			Pin code	641 032
Dr. SHIVA PRASAD EDARA	INDIAN	INDIA	House No.	ASSISTANT PROFESSOR DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING, VNR VIGNANA JYOTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY
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			Country	INDIA
			Pin code	638060

Natural Person (✓)		Other than natural Person			
		Small Entity (x)	Startup (x)	Others (x)	
4. INVENTOR(S) [Please tick at the appropriate category]					
Are all the inventor(s) same as the applicant(s) named above?		Yes (✓)			
If "No", furnish the details of the inventor(s)					
5. TITLE OF THE INVENTION					
IoT and Cloud based low-cost smart irrigation system					
6. AUTHORISED REGISTERED PATENT AGENT		IN/PA No.	- NA-		
		Name			
7. ADDRESS FOR SERVICE OF APPLICANT IN INDIA		Name	Dr. M SATHYA		
		Postal Address	ASSOCIATE PROFESSOR, DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING, ISLAMIAH INSTITUTE OF TECHNOLOGY, BG ROAD, HULIMAVU, BANGALORE, KARNATAKA, 560076.		
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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)
NA	NA	NA	NA	NA	NA
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			
NA		NA			
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			
NA		NA			
11. IN CASE OF PATENT OF ADDITION FILED UNDER SECTION 54, PARTICULARS OF MAIN APPLICATION OR PATENT : NA					
Main application/patent No. : NA		Date of filing of main application : NA			
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). We, the above named inventor(s) are the true & first inventor(s) for this Invention and declare that the applicant(s) herein are our assignee or legal representative.					
NAME		SIGNATURE		DATE	
Dr. M SATHYA				18/02/2021	

Mr. SANDEEP KUMAR		18/02/2021
Mr. SAROJ KUMAR		18/02/2021
Dr. SAHIL VERMA		18/02/2021
Dr. KAVITA		18/02/2021
Mrs. A. MANJULA		18/02/2021
Dr. P.VIJAYALAKSHMI		18/02/2021
Dr. K.MATHAN		18/02/2021
Dr. SHIVA PRASAD EDARA		18/02/2021
Dr. T. LOGESWARAN		18/02/2021

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

(a) Date
 (b) Signature(s) -----NA-----
 (c) Name(s) of the signatory

(iii) Declaration by the applicant(s)

- We the applicant(s) hereby declare(s) that: -
- 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.
- We are the true & first inventor(s).
- 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 our invention(s).~~
- ~~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.~~
- ~~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.~~

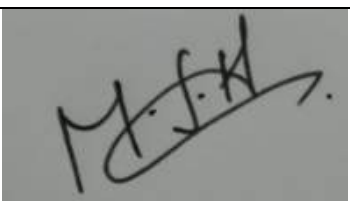
13. FOLLOWING ARE THE ATTACHMENTS WITH THE APPLICATION (a) Form 2

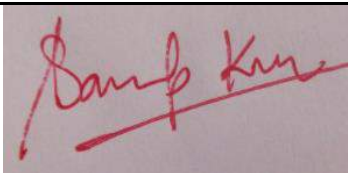
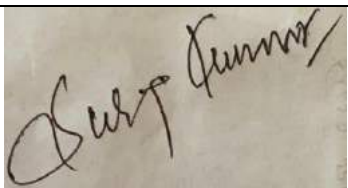
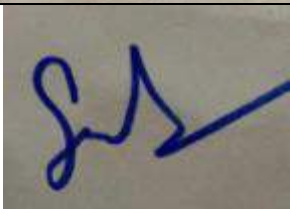
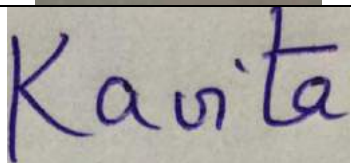

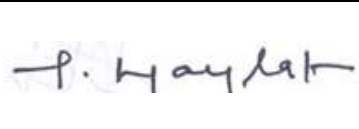
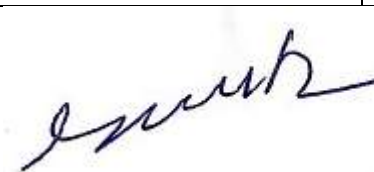
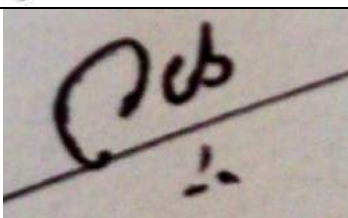
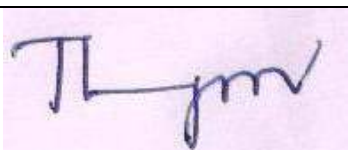
Item	Details	Fee	Remarks
Complete specification	No. of pages : 21		
No. of Claim(s)	No. of claims : 08 and No. of pages :01		
Abstract	No. of pages :01		
No. of Drawing(s)	No. of drawings :-- and No. of pages:--		

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
 - (j).....
- Total fee

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

NAME	SIGNATURE	DATE
Dr. M SATHYA		18/02/2021

Mr. SANDEEP KUMAR		18/02/2021
Mr. SAROJ KUMAR		18/02/2021
Dr. SAHIL VERMA		18/02/2021
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Dr. K.MATHAN		18/02/2021
Dr. SHIVA PRASAD EDARA		18/02/2021
Dr. T. LOGESWARAN		18/02/2021

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

Form 2
THE PATENT ACT, 1970
(39 of 1970)
&
The Patent Rules, 2003
COMPLETE SPECIFICATION
(Section 10 and Rule 13)

APPLICANTS & INVENTORS

IoT and Cloud based low-cost smart irrigation system

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The following specification particularly describes the invention and the manner in which it is to be performed.

TECHNICAL FIELD

The present invention relates to a kind of Intelligent irrigation system, in particular, particularly relate to a kind of Internet of Things Intelligent irrigation system based on cloud computing.

BACKGROUND

Smart Farming is a cultivating the executives idea utilizing current innovation to build the amount and nature of rural items. Ranchers in the 21st century approach GPS, soil checking, information the board, and Internet of Things advancements. By accurately estimating varieties inside a field and adjusting the system in like manner, ranchers can significantly expand the viability of pesticides and composts, and use them all the more specifically. Likewise, utilizing Smart Farming methods, ranchers can more readily screen the necessities of individual animals and change their nourishment correspondingly, in this manner forestalling illness and upgrading crowd wellbeing.

CN105573277A: The creation unveils an Internet of Things canny water system framework dependent on distributed computing. The framework involves a smart water system cloud administration stage, a keen water system cloud server farm, an Internet of Things terminal administration regulator, and a water system gadget, the water system gadget and a sensor are both associated with the Internet of Things terminal administration regulator, the Internet of Things terminal administration regulator is associated with the wise water system cloud

server farm through a remote organization, a client signs in the clever water system cloud administration stage for acquiring administration by means of the organization, the savvy water system cloud administration stage is sent in the wise water system cloud server farm, and the insightful water system cloud administration stage offers support for the client. As indicated by the framework, the origination is novel, progressed distributed computing, the Internet of Things, enormous information, versatile application, and the man-made consciousness innovation are utilized, the framework is basic, simple, and advantageous, the practicality is acceptable, the systems administration is helpful, the unwavering quality is high, the transmission rate is quick, and the high level Internet of Things wise water system framework dependent on distributed computing is accommodated the application and advancement of the advances of distributed computing and Internet of Things in the water conservancy industry.

The water system arrangement of flow water conservancy industry application is completely acknowledged by dcs, this sort efficient pervasiveness work singleness, muddled activity, and data sharing degree is low, effectively frames the inadequacies, for example, data island. And being hard to of embracing acknowledges Based Intelligent Control to water system equipment. In late years, water preservation cloud, water conservancy Internet of Things, huge information, Mobile arrangement and man-made brainpower innovation are broadly utilized in the robotization and data arrangement of industry-by-industry, alongside the development bit by bit of these innovation, plan a sort of Internet of Things Intelligent water system framework dependent on distributed computing,

for advancement water conservancy and farming industry data framework structure streamlining overhauling, normal turn of events and the two combinations of propeller systems administration and distributed computing are essential.

CN104656617A: The development reveals a framework and a technique for directing and controlling a nursery climate dependent on Internet of Things and distributed computing innovation. The framework involves a nursery climate sensor module, an ecological information transmission module, a cloud stage worker module, a nursery climate control module and a nursery climate executing instrument. The guideline and control for the climate are joined with the necessities of harvests, yet are not in single limit control, so the nursery climate control is more exact; by using naturally observed ecological information, the confounded displaying measure about harvest climate association is stayed away from, and the climate is straightforwardly viewed as contribution; by using a yield model, the reaping time to market and yield of the harvests can be anticipated; the framework is critical for improving the knowledge and automaticity of nursery the board and improving the financial advantage of nursery development.

Horticultural Internet of Things, alludes to utilize temperature, moistness, pH esteem, brightening, CO₂ sensor gadget, the temperature in testing climate, relative mugginess, pH esteem, power of enlightenment, soil supplement, CO₂ the actual indexes, for example, fixation, understand the impression of worker family unit to ecological data by ongoing far off transmission

and capacity, are that the ordinary case that industry sustains agribusiness epitomizes.

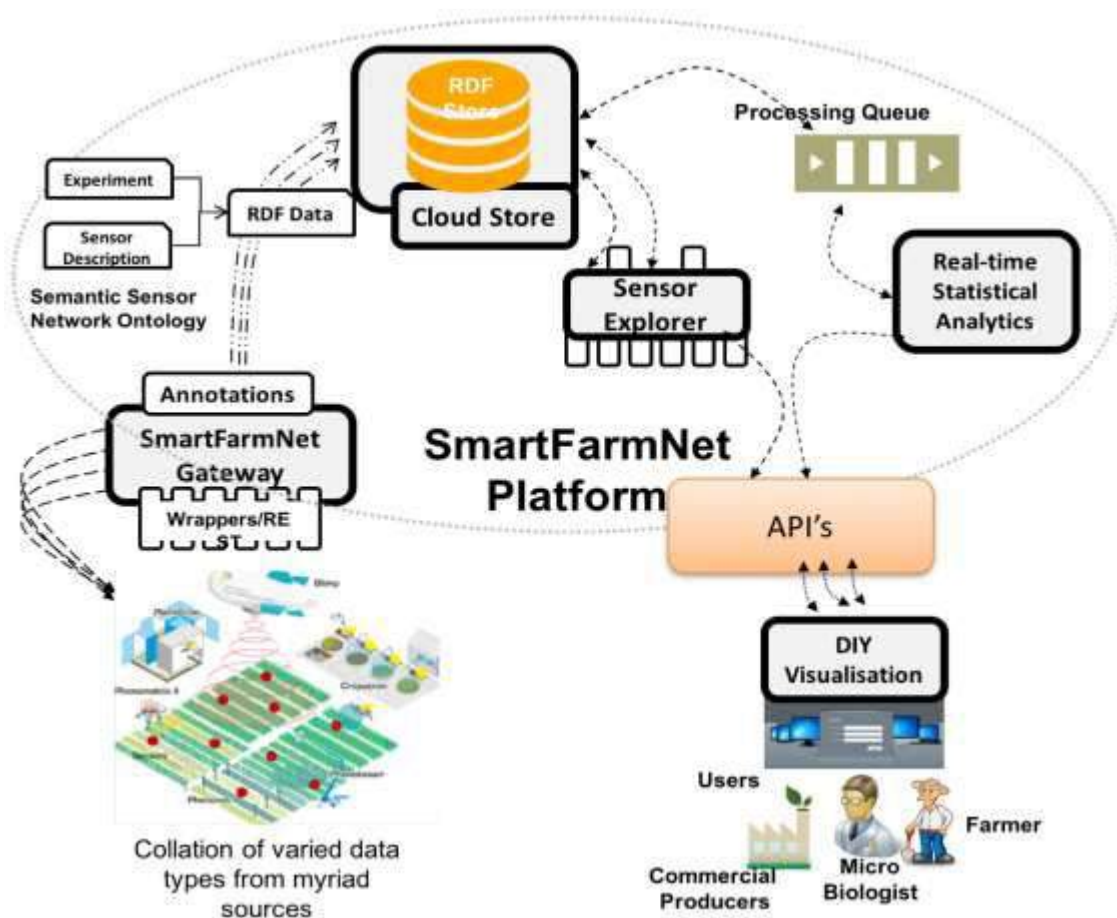
However, propose as industry proficient individual, the accentuation that we give close consideration to ought not be Internet of Things itself, yet Internet of Things how is used to understand the valuable business of profitable life and application. For agribusiness Internet of Things, the object of procurement Agricultural Information is the securing by data all things considered, does choice help, completes the Based Intelligent Control of horticultural gear, the switch and so on of the programmed lifting of, for example, heat holding shade, the cooling establishment in nursery related to information.

Conventional agribusiness expert framework bears the choice help capacity of part, however depends on authentic information generously, doesn't set up with the information of Internet of Things Real-time Obtaining and contacts. On the other hand, alongside equipment innovation development partially, the nursery even accuracy the executives of cycle of Industrial Agriculture creation are the way earth to do the Based Intelligent Control of equipment with plant development circumstance, to improve nursery the board productivity, lessen costs, increment output. Therefore, following farming in nursery establishment confronting difficulties completes the online control choice of agrarian gear dependent on the impression of horticulture Internet of Things, gives long-range data profound preparing and administration.

Be unique in relation to business creation, the harvest in nursery is life element, has separate development mood and ecological demand. How to use Internet of

Things data and yield interest, propose Environment Controlling Strategy, acknowledging dropping into the huge nursery exact controlling of little yield, is the specialized obstruction that exploration staff needs to handle

Keen Farming has a genuine potential to convey a more profitable and reasonable agrarian creation, in light of a more exact and asset productive methodology. Accuracy Agriculture: Management of spatial and fleeting changeability to improve monetary returns following the utilization of data sources and diminish natural effect.



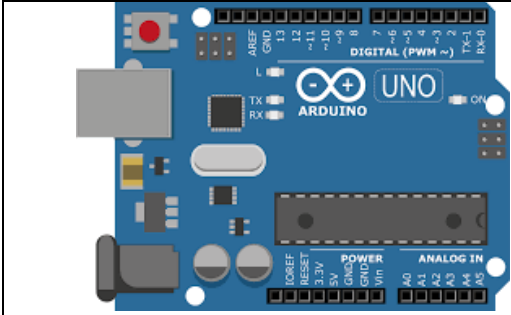
SUMMARY

HARDWARE USED

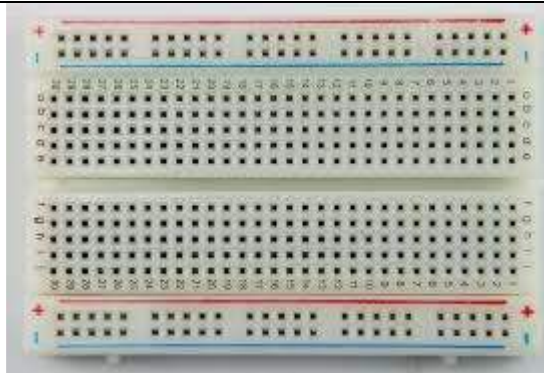
- 1. ARDUINO UNO**
- 2. ETHERNET SHIELD**
- 3. SOIL MOISTURE SENSOR**
- 4. ULTRASONIC SENSOR**
- 5. GPS MODULE**
- 6. BREAD BOARD**
- 7. LCD**
- 8. GAS SENSOR**
- 9. PUMP**
- 10. RELAY**
- 11. TEMPERATURE HUMIDITY SENSOR**
- 12. POWER SUPPLY**



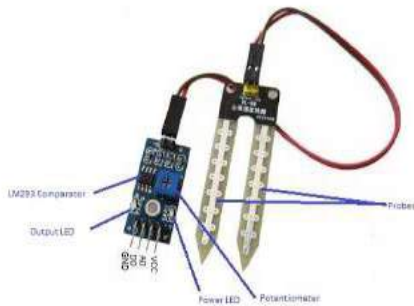
Aurduino Uno Microcontroller: It is an open source with both equipment and programming drive with 8 bit ATmega328 a low force CMOS regulator dependent on RISC design .It has best with assortment of decisions completely static activity and self programmable blaze program memory in the framework. It very well may be fueled utilizing USB link from PC either an AC mains supply.



The Arduino Ethernet Shield associates your Arduino to the web in only minutes. Just plug this module onto your Arduino Board, associate it to your organization with a RJ45 link (excluded) and follow a couple of straightforward strides to begin controlling your reality through the web. As consistently with Arduino, each component of the stage – equipment, programming and documentation – is uninhibitedly accessible and open-source.



A breadboard is a solderless gadget for impermanent model with hardware and test circuit plans. Most electronic segments in electronic circuits can be interconnected by embeddings their leads or terminals into the openings and afterward making associations through wires where suitable.



Soil sensor: This dirt sensor identifies the dampness level of soil on field from 20%(wet) - 200 % (dry). It is a circuit board having two tests which detects the dirt status. This sensor will show the volumetric substance of soil and loss of water content because of vanishing. This sensor is converged with the regulator and coded.

	<p>Wi-Fi MODULE</p> <p>This module is an independent attachment which is fit for facilitating an application .It contains the TCP/IP stack and microcontroller ability, this module permits microcontrollers to associate with Wi-Fi organizations. It has 16 GPIO pins</p>
	<p>Temperature Sensor consolidated data planning sensor that may an opportunity to be utilized to figure temperature for an electrical yield corresponding of the temperature (in °C). It may measure temperature extra flawlessly over a using an indoor regulator..</p>
	<p>Dampness Sensor HR 202 Humidity is facilitated circuit sensors that can be used to measure the proximity of water in show up. The HR202 is such a tenacity tricky resistor created utilizing regular macromolecule materials, it very well may be used as a piece of occasions like: facilities, storing, workshop, material industry, etc. The Stickiness sensor with its yield Relative to the temperature (in RH %). The operational temperature broaden is from20-95%RH..</p>



MQ-6 gas sensor modules are utilized in gas spillage recognizing supplies in family and industry, are reasonable for distinguishing of LPG, iso-butane, propane, LNG, evade the clamor of liquor and cooking exhaust and tobacco smoke. It likewise help in recognizing gas around the field , wich might be destructive to the yields.



A ultrasonic sensor is an electronic gadget that gauges the distance of an objective article by discharging ultrasonic sound waves, and converts the reflected sound into an electrical sign. Ultrasonic waves travel quicker than the speed of discernible sound (for example the sound that people can hear).



GPS is an arrangement of 30+ route satellites circumnavigating Earth. We know where they are on the grounds that they continually convey signals. A GPS collector in your telephone tunes in for these signs.

	<p>LCD Display: This is a basic 16 character by 2 line display. Black text on Green background Utilizes the extremely. common HD44780 parallel interface chipset (datasheet). Interface code is freely available. You will need ~11 general I/O pins to interface to this LCD screen. Includes LED backlight.</p>
	<p>The motor is connected to the relay for managing the flow of current. Motor pump is used to pump the water from water storage during the requirement of water to the soil/field.</p>
	<p>Relay: It is used to connect the valves to the microcontroller, the ignition key when turned ON; the electricity flows through the relay and then connects the battery to the motor to start. They allow low power circuits with small switch</p>

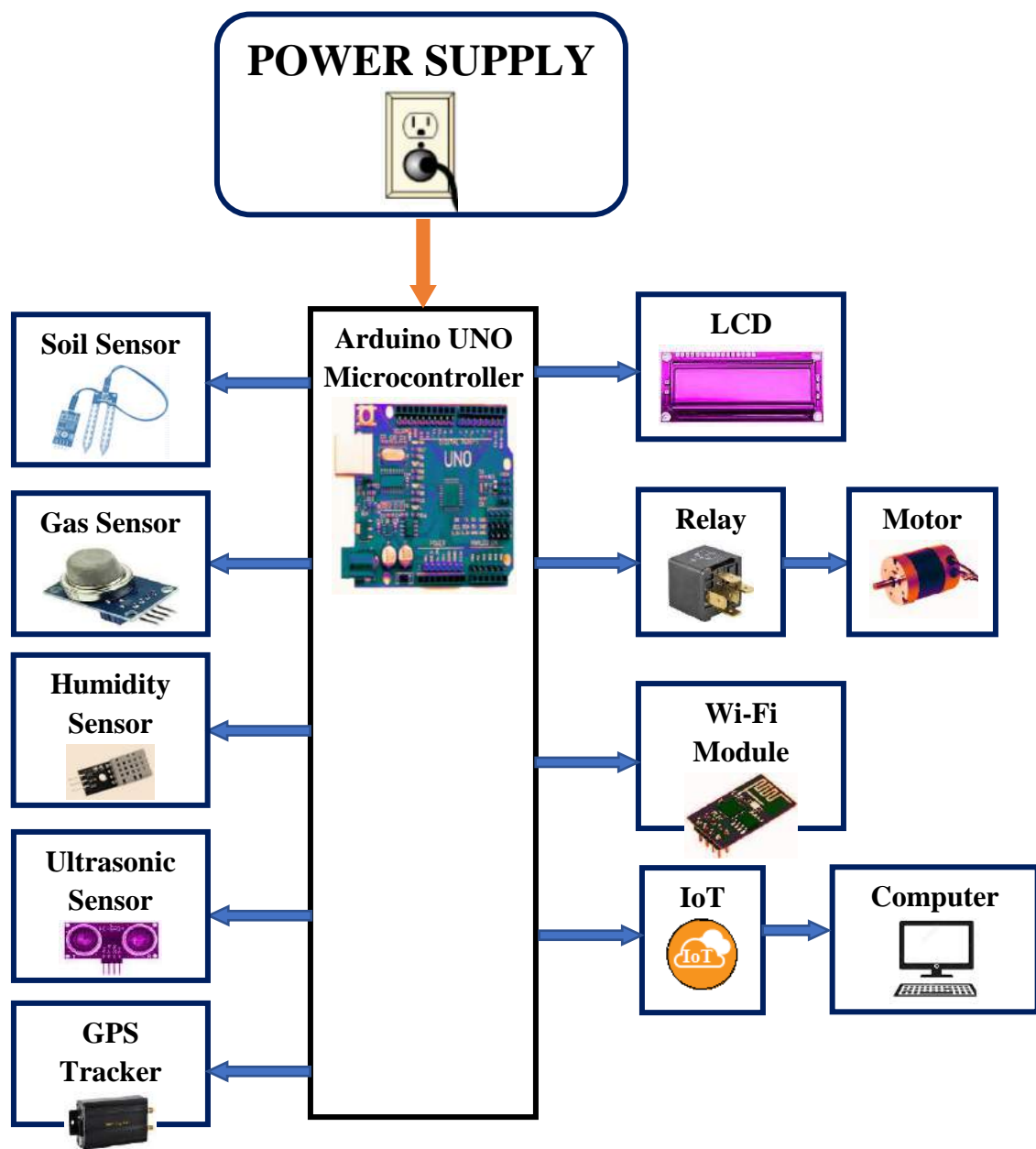
EXISTING SYSTEM

Cultivation is the establishment of our Nation. In significant time-frame past days agriculturists used to calculate the readiness of soil and impacted assumptions to create which to sort of item. They didn't consider the moistness, level of water

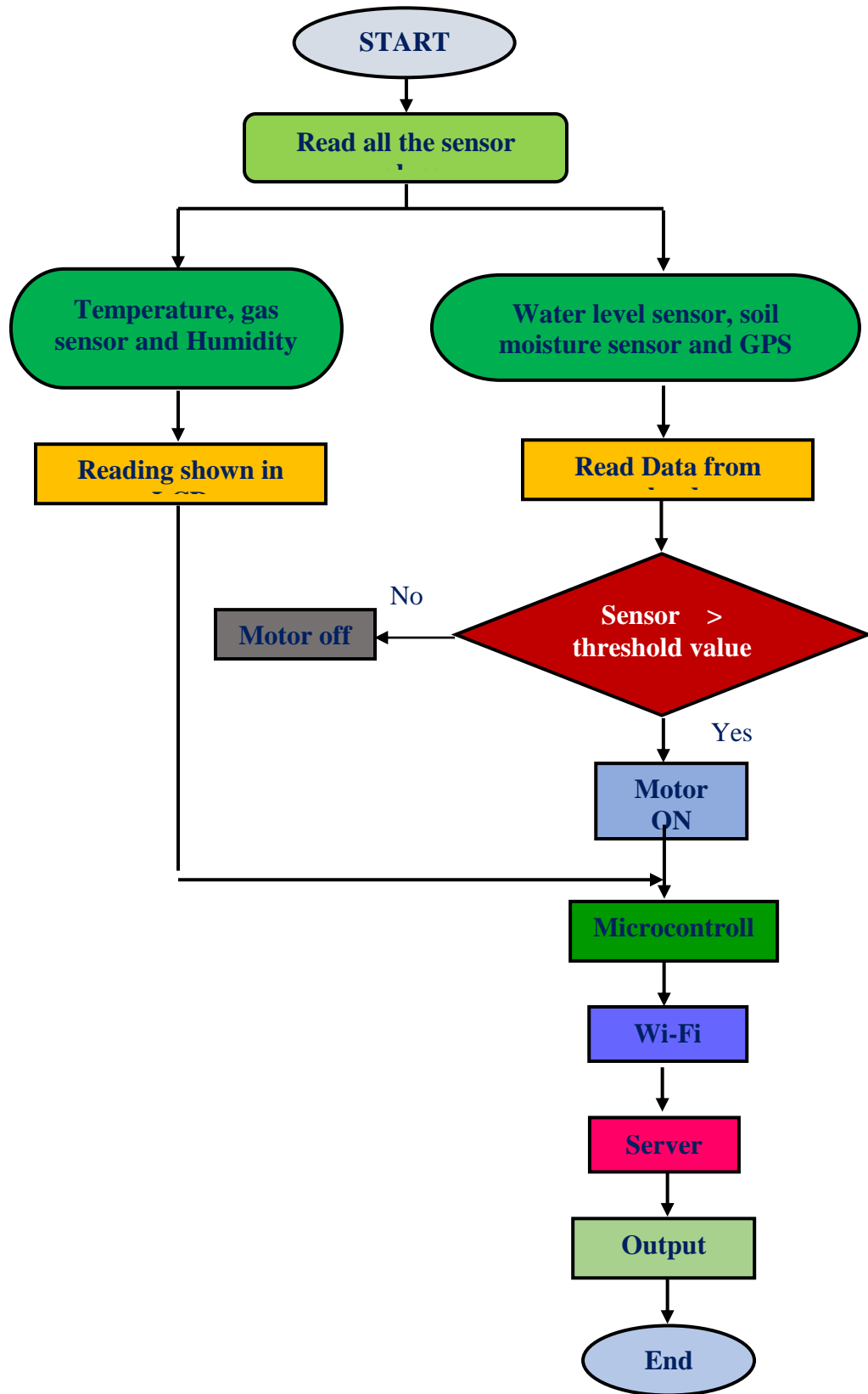
and particularly atmosphere condition which awful an agriculturist more. They use pesticides considering a couple of doubts which had lead a certified effect to the yield if the speculation isn't right .The benefit depends upon the last period of the gather on which agriculturist depends.

PROPOSED SYSTEM

To improve the proficiency of the item there by supporting both farmer and nation we need to use the development which evaluates the idea of collect and giving proposals. The Internet of things (IOT) is redoing the agribusiness connecting with the ranchers by the expansive collection of procedures, for example, precision and traditionalist development to go facing difficulties in the field. IOT headway helps in get-together data on conditions like environment, temperature and profitability of soil, collect web viewing draws in region of weed, level of water, bug affirmation, creature obstruction in to the field, change improvement, development . IOT use ranchers to get related with his home from any place and at whatever point. Far off sensor systems are utilized for checking the ranch conditions and little scope regulators are utilized to control and robotize the property shapes.



One of the fundamental and essential administrations to get by on earth is Water. Ongoing time expanding the shortage of water because of filling in populace. So this is turning out to be as a general deterrent. The old water system framework which requests a great deal of water, so it needs shrewd strategies for diminishing the level of squandering accessible water for the water system. We have been seeing the expanding of enormous interest for Internet of things in each space from little and straightforward applications to huge and complex applications. Basically usage of a Smart Irrigation is exceptionally mind boggling bargain, however relationship with IoT utilizing Smart remote sensors it brings an extraordinary administration framework. The Humidity and Temperature Sensor sense the both water fume substance and temperature around the plant. The Soil Moisture Sensor sense the dirt dampness of a plant, on the off chance that water content is underneath least prerequisite, at that point water will supply from water repository utilizing transfer and Ultrasonic sensor quantifies the water level of store after that sends the information to Microcontroller. Microcontroller gets the information from sensors, measure the information and ship off objective through an IoT.

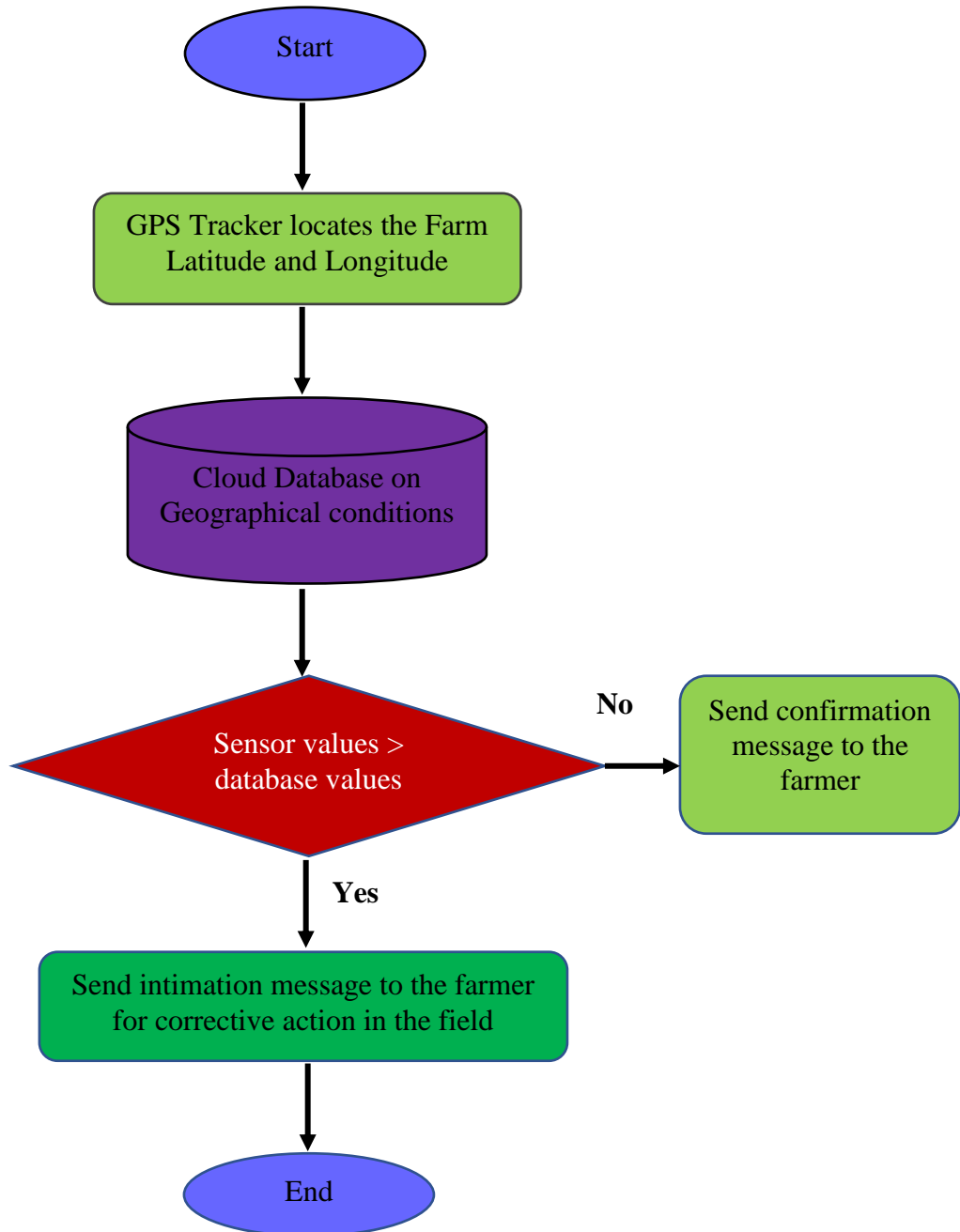


The framework is worked by utilizing Arduino Uno and Wi-Fi Module, two soil dampness level sensors, Relay and LCD. The dirt dampness level sensors detects the dampness level regularly and the microcontroller measures the information and sends through the enrolled Wi-Fi module which can get to the web and transfer the information to the cloud in the web administration. Contingent on the dirt dampness levels the engine is turned ON/OFF consequently. In this framework the engine turns ON when the dry level is distinguished and watering is made until required sodden level and later killed in the interim all the qualities are transferred to the cloud later they can be used for information investigation. In this framework ideal watering is done in the ranch which is done consequently.

All the gadgets appeared above is associated the internet by means of Arduino Uno. Soil dampness sensor recognize the dampness level of the soil,DHT11 detetect temperature and mugginess of that specific zone. All this information will show up on the dashboard of ubidot.com. A basic estimation of dampness and temperature level is determined to the gadgets of dashboard of ubidot.com, when the estimation of temperature,humidity and dampness go past the basic worth it will trigger an occasion that is it will send this data to our mobile phone and as needs be we can play out the ideal activity distantly.

As The earth is forgotten about with restricted assets for horticulture there is a most extreme need to safeguard our assets, for example, arable land ,water and rich soil which can likewise assist the rancher with creating greater quality yield and increment the expense of creation .Hence there is a need of appropriation of

Modernisation in Agriculture, for example, shrewd cultivating which will lessen human intercession and by utilizing ideal assets like water the composer can develop more yield which will likewise help in the affordable development of the nation.



This development proposes a considered combining the latest advancement into the agrarian field to turn the standard methods for water framework to momentum procedures in this manner making straightforward beneficial and mild managing. Some level of automation is introduced enabling noticing the field and the item conditions inside some long-discrete degrees using cloud organizations. The focal points like water saving and work saving are begun using sensors that work therefore as they are altered. This thought of modernization of cultivating is direct, sensible and operable. As depending upon these boundary regards farmer can without a very remarkable stretch pick which fungicides and pesticides are used for improving yield creation.

CLAIM (S)

- 1) The IoT an Cloud based low-cost smart irrigation system comprises Arduino Uno ; Ethernet Shield ; Soil Moisture Sensor ; Ultrasonic Sensor ; Gps Module ;Bread Board ;Lcd ;Gas Sensor ; Pump ;Relay ; Temperature Humidity Sensor.
- 2) The system claimed in claim 1,wherein the Soil dampness sensor recognize the dampness level of the soil,DHT11 detetect temperature and mugginess of that specific zone.
- 3) The system claimed in claim 1,wherein the estimation of temperature, stickiness and dampness go past the basic worth it will trigger an occasion that is it will send this data to our phone and likewise we can play out the ideal activity distantly.
- 4) The system claimed in claim 1,wherein the microcontroller measures the information and sends through the enlisted Wi-Fi module which can get to the web and transfer the information to the cloud in the web administration.
- 5) The system claimed in claim 1,wherein the soil moisture levels the motor is turned ON/OFF automatically.
- 6) The system claimed in claim 1,wherein the motor turns ON when the dry level is distinguished and watering is made until required sodden level and later killed then all the qualities are transferred to the cloud later they can be used for information examination.
- 7) The system claimed in claim 1,wherein the framework ideal watering is done in the ranch which is done consequently.
- 8) The system claimed in claim 1,wherein the keen cultivating will altered the universe of cultivating and it will expand the efficiency just as improve the quality and can save lives of rancher.

ABSTRACT

IoT and Cloud based low-cost smart irrigation system

This invention is an exceptionally ease and an imaginative framework to realize the dampness level of the dirt from a far-off spot. The framework utilizes Arduino UNO, soil dampness sensor for sending information to the cloud and the client. In the proposed brilliant horticultural framework, the specialist centers to defeat the issues in this conventional water system frameworks utilized for farming by actualizing the IoT and cloud. The proposed framework is actualized utilizing four significant segments Microcontroller Arduino Uno, Soil Moisture level Sensors, Wi-Fi Module, Relay. LCD show and Motor. The dirt dampness level sensors detects the dampness level often and the microcontroller measures the information and sends through the enlisted Wi-Fi module which can get to the web and transfer the information to the cloud in the web administration. This framework works with exceptionally fewer human associations. The homestead factual report can be seen by the rancher whenever on the App, accordingly making ideal use of water for better harvest yield.

FORM 3
THE PATENTS ACT 1970
(39 of 1970)
&
The Patent Rules, 2003
STATEMENT AND UNDERTAKING UNDER SECTION 8
(See Section 8, rule 12)

NAME OF APPLICANTS & INVENTORS




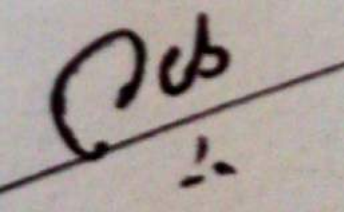

IoT and Cloud based low-cost smart irrigation system

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Hereby declare, We have not made any application for the same / substantially the same invention outside India.

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Dr. K.MATHAN		18/02/2021
Dr. SHIVA PRASAD EDARA		18/02/2021
Dr. T. LOGESWARAN		18/02/2021

To
The Controller of patents, The Patent office at CHENNAI.

FORM 5
THE PATENTS ACT, 1970 (39 of 1970)
&
THE PATENTS RULES, 2003
DECLARATION AS TO INVENTORSHIP
(See section 8, rule 12)

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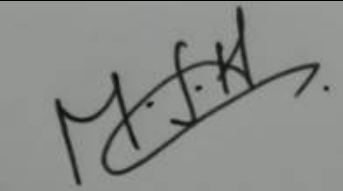
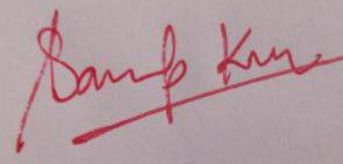
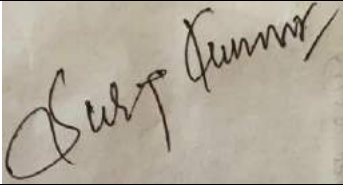
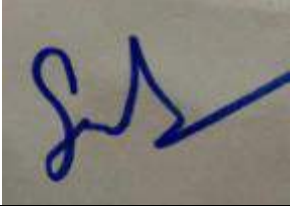
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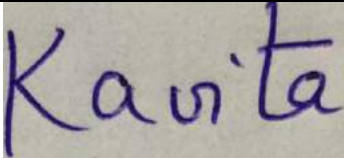



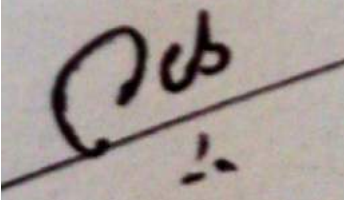

Hereby declare that the true and first inventor of the invention disclosed in the complete specification filed in pursuance of my application numbered _____ dated _____

TITLE OF THE INVENTION: IoT and Cloud based low-cost smart irrigation system

3.Declaration to be given when the application in India is filed by the Applicant in the convention country: -

I the applicant in the convention country hereby declare that our right to apply for a patent in India is by way or assignment from the true and first inventor.

NAME	SIGNATURE	DATE
Dr. M SATHYA		18/02/2021
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Mr. SAROJ KUMAR		18/02/2021
Dr. SAHIL VERMA		18/02/2021

Dr. KAVITA		18/02/2021
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To
The Controller of Patents, The Patent office at CHENNAI.

FORM 9
 THE PATENTS ACT, 1970
 (39 of 1970)
 &
 THE PATENTS RULES, 2003
REQUEST FOR PUBLICATION
 (See section 11A(2); rule 24A)

We (state name, address and nationality of Applicant & Inventors)




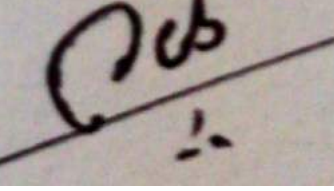

TITLE OF THE INVENTION: IoT and Cloud based low-cost smart irrigation system

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Hereby request for early Publication of our application for Patent No. _____ dated _____ under section 11A(2) of the act.

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Dr. K.MATHAN		18/02/2021
Dr. SHIVA PRASAD EDARA		18/02/2021
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To
The Controller of patents, The Patent office at CHENNAI.



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

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

Application Details

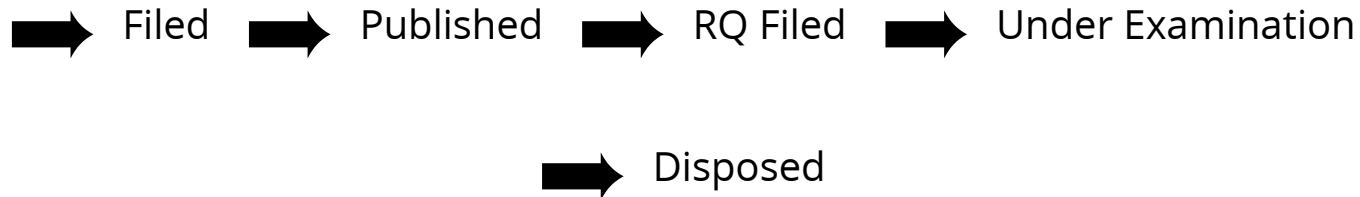
APPLICATION NUMBER	202141051117
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	08/11/2021
APPLICANT NAME	1 . Dr. VIJAYALAKSHMI P 2 . Dr. MATHAN K 3 . Dr. D.RASI 4 . Dr.JEYALAKSHMI.A 5 . Dr. S GOVINDARAJU 6 . Mr.D.BASKAR 7 . Dr.POTLURI PANDARINATH 8 . Dr. R. KARTHIK 9 . Dr. P. A. ABDUL SALEEM 10 . Mr. G. SREENIVASA REDDY
TITLE OF INVENTION	MACHINE LEARNING BASED DOCTOR APPOINTMENT WITH DISEASE PREDICTION
FIELD OF INVENTION	COMPUTER SCIENCE
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PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	19/11/2021

Application Status

APPLICATION STATUS

Awaiting Request for Examination

[View Documents](#)



In case of any discrepancy in status, kindly contact ipo-helpdesk@nic.in

(12) PATENT APPLICATION PUBLICATION

(21) Application No. 202211035079 A

(19) INDIA

(22) Date of filing of Application : 19/06/2022

(43) Publication Date : 01/07/2022

(54) Title of the invention : DESIGN OF SOLAR THERMAL POWER INTEGRATION SYSTEMS TO INCREASE THE EFFICIENCY OF UTILISATION OF RENEWABLE ENERGY RESOURCES IN HOUSING UNITS

(51) International classification : H02J0003380000, H02J0003460000, C10L0003100000, G06Q0010060000, F03G0006060000

(86) International Application No : NA
Filing Date : NA

(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

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5) OMBEER SAINI

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11) BENNY JOHN J

12) SURESH C

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(57) Abstract :

Design of Solar thermal power integration systems to increase the efficiency of utilisation of renewable energy resources in housing units is the proposed invention. The proposed invention focuses on integrating the solar thermal power to the electricity supply of housing units. The invention focuses on utilization renewable energy resources rather than Non-renewable energy resources saving the environment. The invention also aims to decrease the financial expenses experienced by users.

No. of Pages : 12 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202241030156 A

(19) INDIA

(22) Date of filing of Application :26/05/2022

(43) Publication Date : 03/06/2022

(54) Title of the invention : DESIGN OF LOW VOLTAGE INDUCTION MOTOR-PUMP FOR AGRICULTURAL PURPOSE

(51) International classification :H02K0053000000, H02J0003140000, H02K0011000000, H02J0003000000, F03B0013060000
(86) International Application No :NA
Filing Date :NA
(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

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(57) Abstract :

Annexure-3 Electrical energy is the backbone of our country. There is a demand for electrical power. More recently the arrival of new power plants does not produce electrical energy as per our country's requirement. Electrical motors, pumps, household appliances, and electronic appliances which consumes high electrical power is the main reason. In hill stations and many areas around our country, the electrical voltage supplied by Electricity Board is low due to losses. So, the consumer gets 160V-180V instead of getting 220V-240V. The electrical motor used consumes more electrical energy and hence there is wastage in electricity and money for the consumer. In case, 0.5HP motor which is enough for pumping water for the consumer's requirement under normal single-phase voltage 220V-240V is not available, the consumer will search for a higher HP motor than the required HP motor. Instead of choosing a higher HP motor, a motor with a single-phase 24 slot, 2 poles 0.5 HP (0.375kW) motor-pump which operates on 100V-180V as its rated voltage and the performance, efficiency, and all the electrical parameters equivalent to a motor-operated on 220V-240V is designed. The winding design in the stator such as No. of turns, wire gauge, stampings, insulation is changed accordingly to meet the requirements of the low voltage induction motor.

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(57) Abstract :

Security patrolling robot with a night vision camera is utilized to secure any site. The robotic vehicle has a night vision camera and sound sensors and moves at predetermined intervals. It uses a predefined line to follow when patrolling. When sound is detected, it comes to a halt at points before moving on to the next. The system uses infrared-based path-following technology to patrol the designated area. It monitors each area with a 360-degree rotating HD camera for any trespassing. It can listen in on the surrounding noise. Any sound is recognized once the firm has closed, and it begins travelling towards the sound on a predetermined course. It then uses its camera to examine its surroundings for any human faces. As soon as sound or a human face is detected, it records and transmits photos of the scene. We're utilizing IOT gecko to receive and display sent photographs, as well as alert sounds, to the user. As a result, we proposed a completely self-contained security robot that works around the clock and patrols large areas to ensure the facility's safety. These images are then supplied to the user in real time for analysis, and if any problems are found, a manual alarm is triggered. Robot patrolling is utilized in military zones, hospitals, shopping malls, Restricted Zones, Industrial Zones, and Agricultural Zones, to name a few.

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