

A Project Report
On
AIRBORNE VIRUS TRACKING SYSTEM

*submitted in partial fulfillment of the requirements
for the award of the degree of*

Bachelor of Engineering
In
COMPUTER ENGINEERING

Submitted By
Nitin Arun Khandare

Under the guidance of
Prof. Rohit Kumar Wagdarikar



DEPARTMENT OF COMPUTER ENGINEERING

DR. D. Y. PATIL SCHOOL OF ENGINEERING
charholi (bk), via lohegaon pune ^a 412 105
DR. D. Y. PATIL SCHOOL OF ENGINEERING
charholi (bk), via. lohegaon, pune ^a 412 105

DEPARTMENT OF COMPUTER ENGINEERING



Certificate

This is to certify that the project report entitled
AIRBORNE VIRUS TRACKING SYSTEM

which is being submitted by
Nitin Arun Khandare

is in partial fulfillment for the award
of Degree of Bachelor of Engineering
in Computer Engineering

Prof.Rohit Kumar Wagdarikar
GUIDE

Mrs.S.Das
Head of the Department

Dr. S.S.Sonwane
Principal

Acknowledgement

We would like to express our gratitude to all those who helped us to complete this work. We want to thank our guide Prof. Mane G.V. for her continuous help and generous assistance. She helped in a broad range of issues from giving us direction, helping to find the solutions, outlining the requirements and always having the time to see us.

We have furthermore to thank Mrs. S. Das, Head of the Department of Computer Engineering, to encourage us to go ahead and for continuous guidance.

We would like to thank our colleagues who helped us time to time from preparing report and giving good suggestions. We also extend sincere thanks to

all the staff members of Department of Computer Engineering and Information

Technology for helping us in various aspects.

Last but not least we are grateful to our parents for all their support and encouragement.

Nitin A Khandare

(computer engineer)

1. ABSTRACT

Researches are started in sensor and GPS technology to sense and track the location.so in that research many system are implemented.

The Rich people can easily get treatment as they have money. But what about the people who are poor or the Beggars, they don't have money to treat themselves. So it is our duty to keep them away from the airborne viruses.

Airborne Virus are small infected agent, which are very Difficult to detect. This viruses are very dangerous to Human, Not only Human but also to all the living organism like Animals and plants , So it very important to prevent them as soon as possible...

So we are implementing a system that can track the virus. This is AIRBORNE VIRUS TRACKING SENSOR DEVICE, In This embedded system consists of SENSOR and GPS, Sensors can sense the virus and GPS can track the location of that virus.. So through this system we can find the viral diseases and peoples who are infected of this viruses.

CHAPTER 1

1.1 INTRODUCTION

Now a days, many airborne viruses are spread all over the world .These viruses are very dangerous to a living organization, billions of peoples are dead due to this viruses.

It is big problem for over-come and detecting that so in our system we are going to explain those devices that are implementing using sensor technology to sense and GPS for finding location.

Researches are started in sensor and GPS technology to sense and track the location. So in that research many systems are introduce and developed.

So we are implementing a system that can track the virus. This is AIRBORNE VIRUS DETECTION SYSTEM, In That embedded system consists of SENSOR and GPS, Sensors can sense the virus and GPS can track the location of that virus. So through this system we can find the viral diseases and peoples who are infected of airborne viruses.

Airborne Virus are small infected agent, which are very Difficult to detect. This viruses are very dangerous to Human, Not only Human but also to all living organism like Animals and plants So it very important to prevent them as soon as possible.

1.2 PROBLEM STATEMENT

Now a days, many airborne viruses are spread all over the world . These viruses are very dangerous to living a organization ,billions of peoples are dead due to this viruses . It is big problem for over come and detecting that problem so in our system we are going to explain those devices that are implnting using sensor technol. to sence and also GPS for finding location .

CHAPTER 2

LITERATURE SURVEY

2.1 Survey Regarding Airborne virus detecting sensor

The proposed device uses ultrasonic sensor and it can detect any object that lies on the ground, situated a distance of certain meters from the user. The minimum size of the object that can

be detected should not be less than 3 cm width (or diameter). In operation a beam of ultrasound of 40 KHz frequency is transmitted at a regular interval in the forward direction. The ultrasound will be reflected from a nearby object, if any. The sensor will then detect the presence of any object that lies within that meters by detecting the reflected sound beam. The time intervals at which the transmitter will transmit ultrasound depend on the walking speed of the user. For water indication electrodes are fitted at the bottom of the stick these electrodes are sensing water and conveying information to blind people. And for pit indication infrared sensor is used. It informs the people about the pit found in their path. This diffused photoelectric beam sensors consist of a transmitter and a receiver together. These beam sensors look alike Inductive Proximity Sensors and hence also known as IR Proximity Sensors. The emitter emits Infrared rays which are reflected on the receiver through the object to be registered.

2.2 Survey Regarding GPS tracking

The GPS based blind device with user input interfacing get alert the blind person when reaches destination by voice .It consists of microcontroller and GPS and one voice module to generate the voice.pic The Micro controller is the heart of the device. It stores the data of the current location which it receives from the GPS system. So that it can make use of the data stored to compare with the destination location of the user. By this it can trace out the distance from the destination and produce an alarm to alert the user in advance.

The Global Positioning System (GPS) is a U.S. space-based radio navigation system that provides reliable positioning, navigation, and timing services to civilian users on a continuous worldwide basis -- freely available to all. For anyone with a GPS receiver, the system will provide location with time. GPS provides accurate location and time information for an unlimited number of people in all weather, day and night, anywhere in the world. The accurate timing provided by GPS facilitates everyday activities such as banking, mobile phone operations, and even the control of power grids. Farmers, surveyors, geologists and countless others perform their work more efficiently, safely, economically, and accurately using the free and open GPS signals.



2.3 Drawback of Existing System

System size is big so difficult to manage all task fast .

System complexity is increases

Many time cluster system one or more cluster can loss.

Chapter 3

Software Requirements Specification

3.2 System Features

- The initial effort for this detector is focused on Airborne Viruses.
- To develop a sensor that could quickly sense the particular virus.
- Be capable of detecting a number of other viruses also.
- It shall be compact, simple to use, and capable of detecting and identifying single airborne virus particles in real-time as well as detecting whether.
- To track the location of particular virus.

3.3 External Interface Requirements

3.3.1 User Interfaces

API Of Java Programming and GUI Interface

3.3.2 Hardware Interfaces

This System Will Require Processor: Pentium III, IV, V/Laptop. Also Memory (RAM) Of 2GB And HDD: 20GB. AIRBORNE VIRUST DETECTED SENSOR, GPS ETC

3.3.3 Software Interfaces

It requires application Libraries such as Base class libraries and language . java (JDK1.6) also database drivers.

3.3.4 Communication Interfaces

It describe the requirements associated with any communications functions required by this product, including e-mail, web browser, network server communications protocols, Electronic forms, and so on. Define any pertinent message formatting. The TCP/IP protocol is used in this system for the data transmission and receiving. For sending te emails we need the internet for which HTTP protocol is used.

3.4 Non Functional Requirements

3.4.1 Performance Requirements

System should perform as per the requirements. There should not be delay in the transmitting and receiving the requests. There should not be delay while calculating the probability of guilty agent. Accuracy should be greater for execution.

3.4.2 Safety Requirements

Some kind of safety should be taken for this system. Data objects should be small in size. Data of user should be safe. Valid request should be there.

3.4.3 Security Requirements

There is no need of additional security because this kind of system is used in corporate areas where sufficient security is there. For developing this system product protection, data of user,authetication should be secure.

3.4.4 Software Quality Attributes

For the customers and the developers some quality attributes needs to consider are adaptability, availability, correctness, flexibility, interoperability, maintainability, portability, reliability, reusability, robustness, testability, and usability.

3.4.5 Diagrams

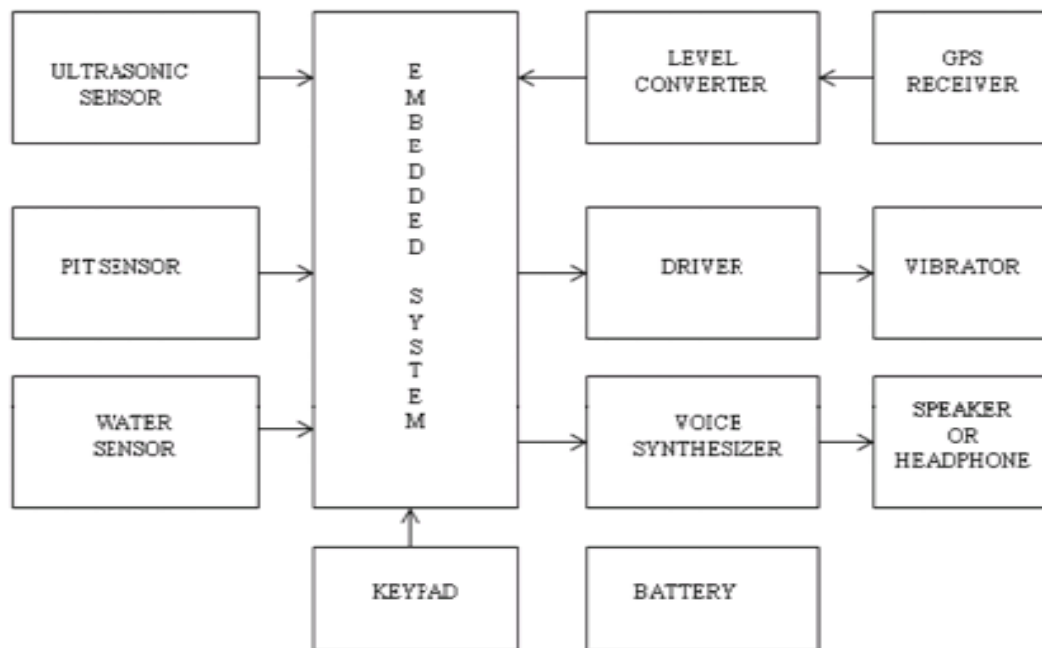
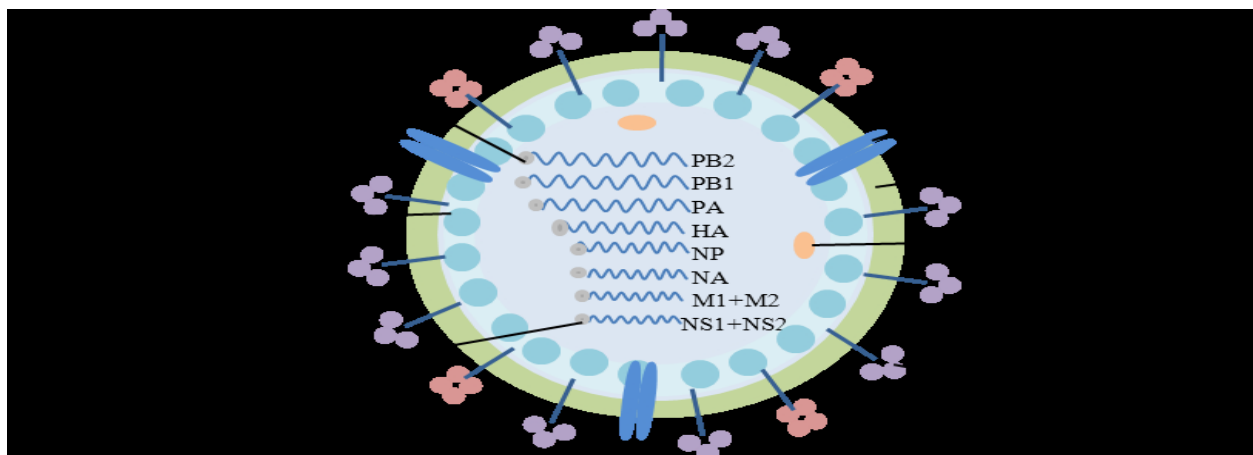
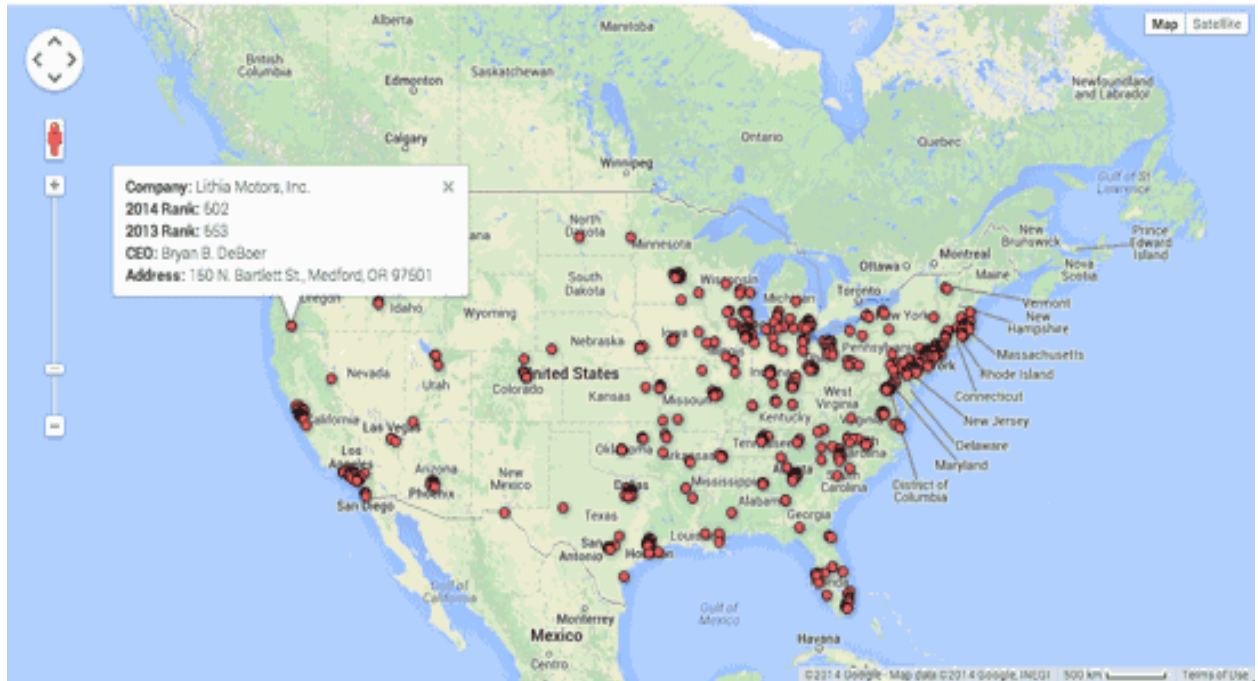


fig. Sensor tracking device

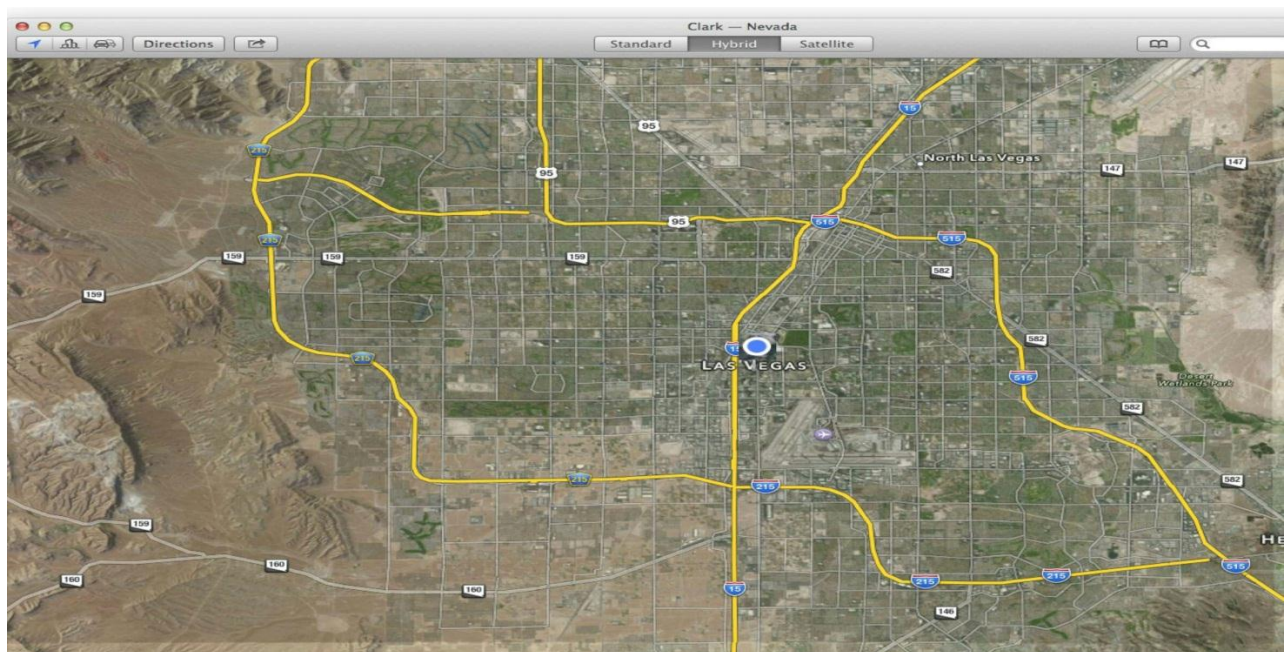
Virus image



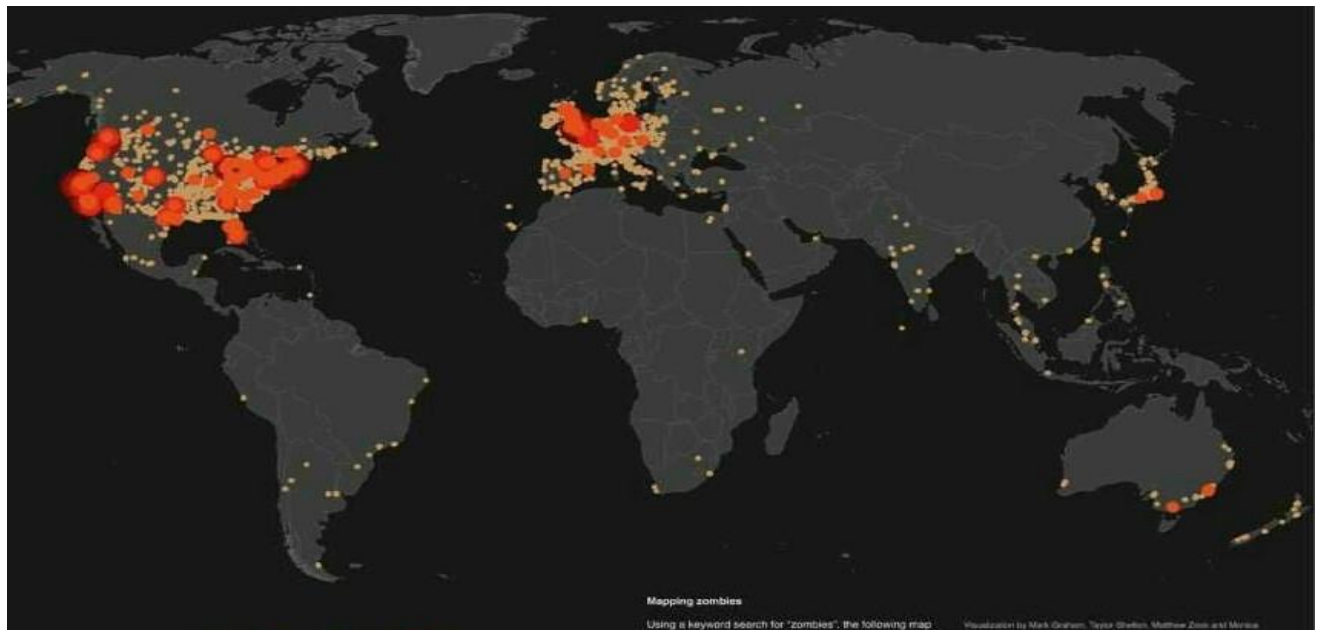
Google map



Device plant area vise



Device tracker

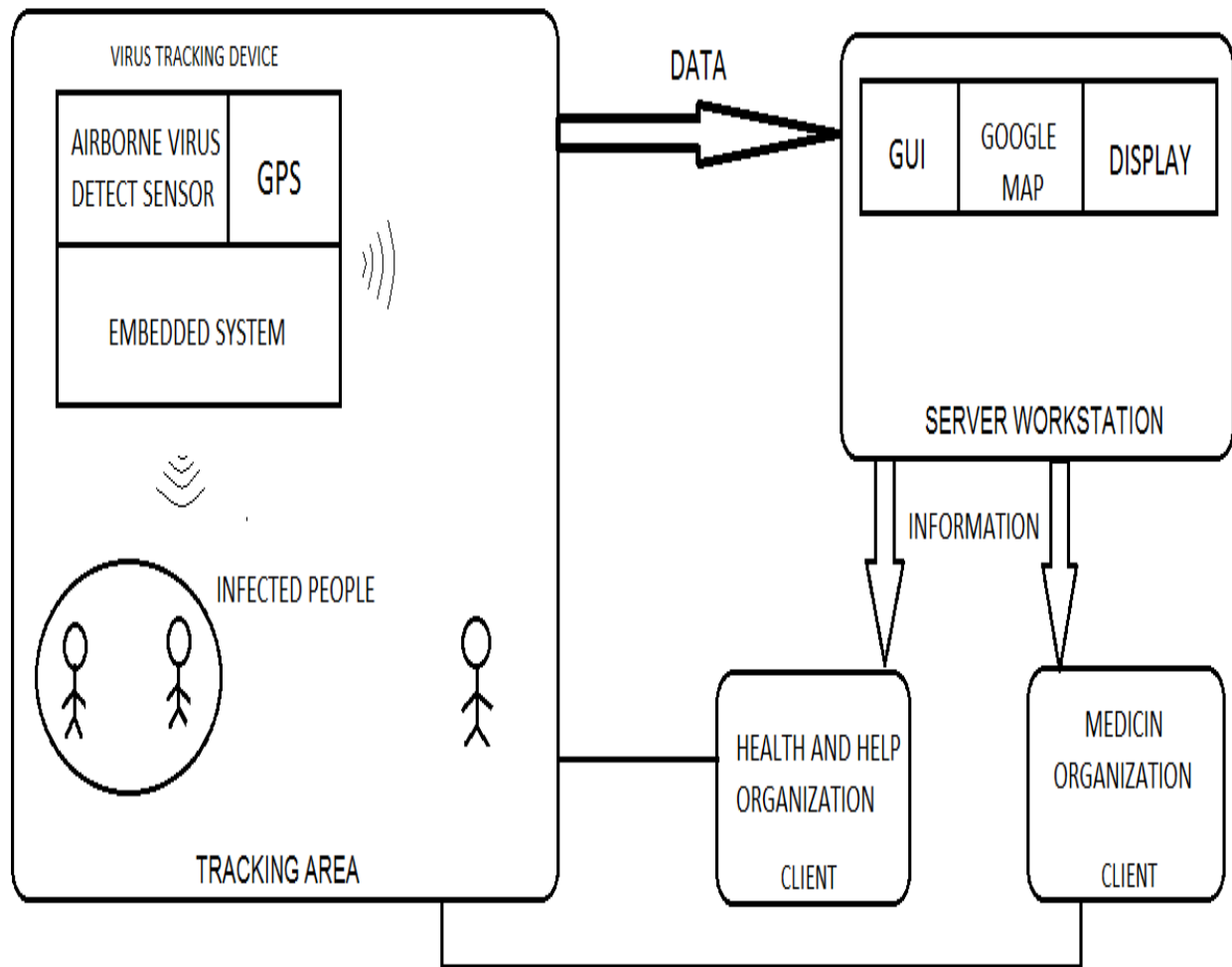


Chapter 4

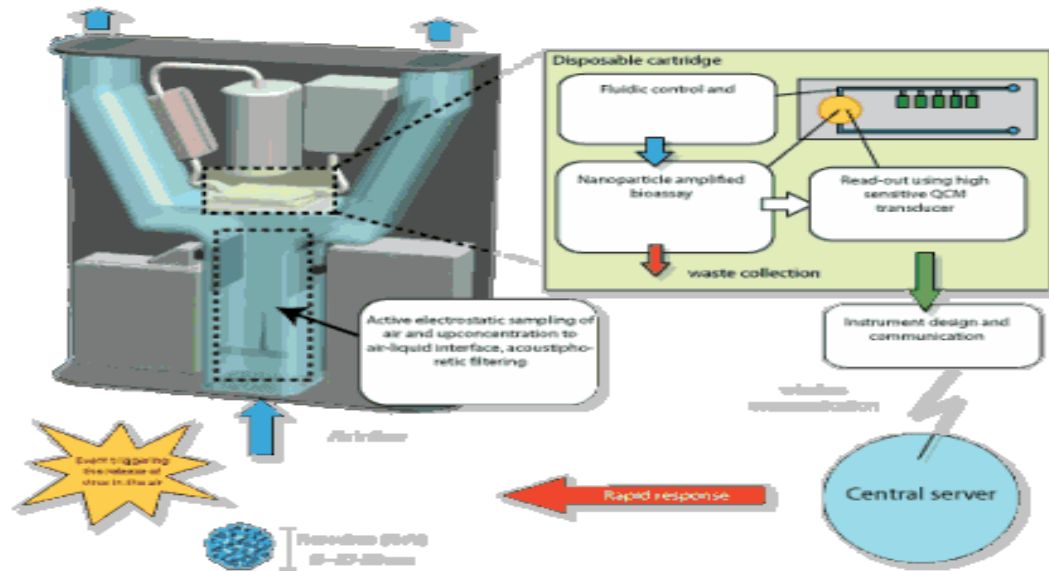
System Design

4.1 System Architecture

Fig. Airborne Virus tracking system



SENSOR STRUCTURE



Chapter 5

5.1 System Implementation Plan

Algorithm

1. Start sensor & GPS.
2. Sensor & GPS detects the Airborne viruses.
3. Save tracking data on the server workstation.
4. Detect the type of viruses.
 - a. known virus send to the Health care department.
 - b. unknown virus send to the Research center.
5. Display the location of virus on the Dashboard.

Chapter 6

Technical Specification

6.1 Advantages

1. The initial effort for this detector is focused on Airborne Viruses.
2. To develop a sensor that could quickly sense the particular virus.
3. Be capable of detecting a number of other viruses also.
4. It shall be compact, simple to use, and capable of detecting and identifying single airborne virus particles in real-time as well as detecting whether.
5. To track the location of particular virus.

6.2 Applications

- It can be used in military and navy purpose to keep soldiers away from viruses.
- It is used in governmental offices to protect.
- We use this in school, colleges and different organizations to protect the people.
- It can also be used in rural areas or like the areas where gypsy peoples are living.
- It is used in industry in all departments to detect and track the viruses.

Conclusion

By making use of airborne virus detecting sensor and GPS tracking technology we can build such embedded system that can be used to detecting harmful or dangerous viruses in place and tracking that infected place. As soon as provide a health and medicine facility to a infected area to overcome or cure disease and avoid disease increasing process. We study to use or working that system in governmental and industry area also.

REFERACES

[1] Mohd Helmy Abd Wahab, Amirul A. Talib, Herdawatie A.Kadir, Ayob Johari, A.Noraziah, Roslina M. Sidek, Ariffin A. "Smart cane: assistive cane for visually impaired people", IJCSI, Vol.8 Issue 4, July 2011.

[2] Yuan, D.; Manduchi, R.; "Dynamic environment exploration using a virtual white cane", in Computer Vision and Pattern Recognition, 2005. CVPR 2005. IEEE Computer Society Conference.

[3] F. van der Heijden, P.P.L. Regtien, "Wearable navigation assistance - a tool for the blind" MEASUREMENT SCIENCE REVIEW, Volume 5, Section 2, 2005

[4] Abhishek Choubey, Dattatray Patil, "RFID Based Cognition Device for Assistance to Blind and Visually Challenged Persons for Indoor Use", International Journal of Engineering and Innovative Technology (IJEIT) Volume 1, Issue 6, June 2012.