Ministry/Department Category: Climate Change Department

Problem Statement: Traffic Management based on air pollution monitoring system

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Methodology (Solution)::

Here we have to manage traffic according to pollution because pollution in certain area due to traffic cause harm (because of **CO2 and CO** level) to the people around it. So problem is to reduce the traffic and Divert such a way which is shortest way and having much amount of tree so pollution can be compensate.

There were many technology develop which gives information about pollution level and ppm of pollutant. So we are taking those data by which we divert the traffic.

1) First we are taking data from air pollution monitoring system and data is about pollution level of certain area where air pollution monitoring system is implemented. Air pollution monitoring system is implement on those area of city where traffic and pollution is big issue. This data is send to the server.

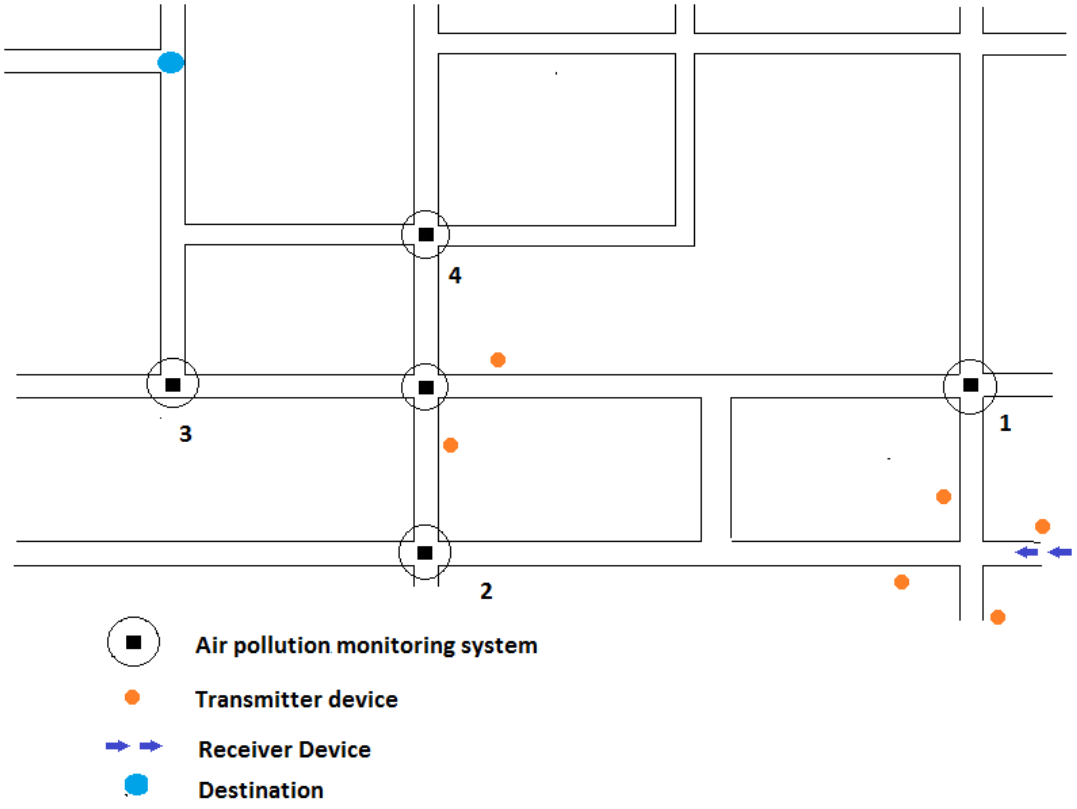
We develop one application which shows all information about pollution level, traffic and other number of possible route where traffic is less. In this method user require smart phone (Having GPS), Internet.

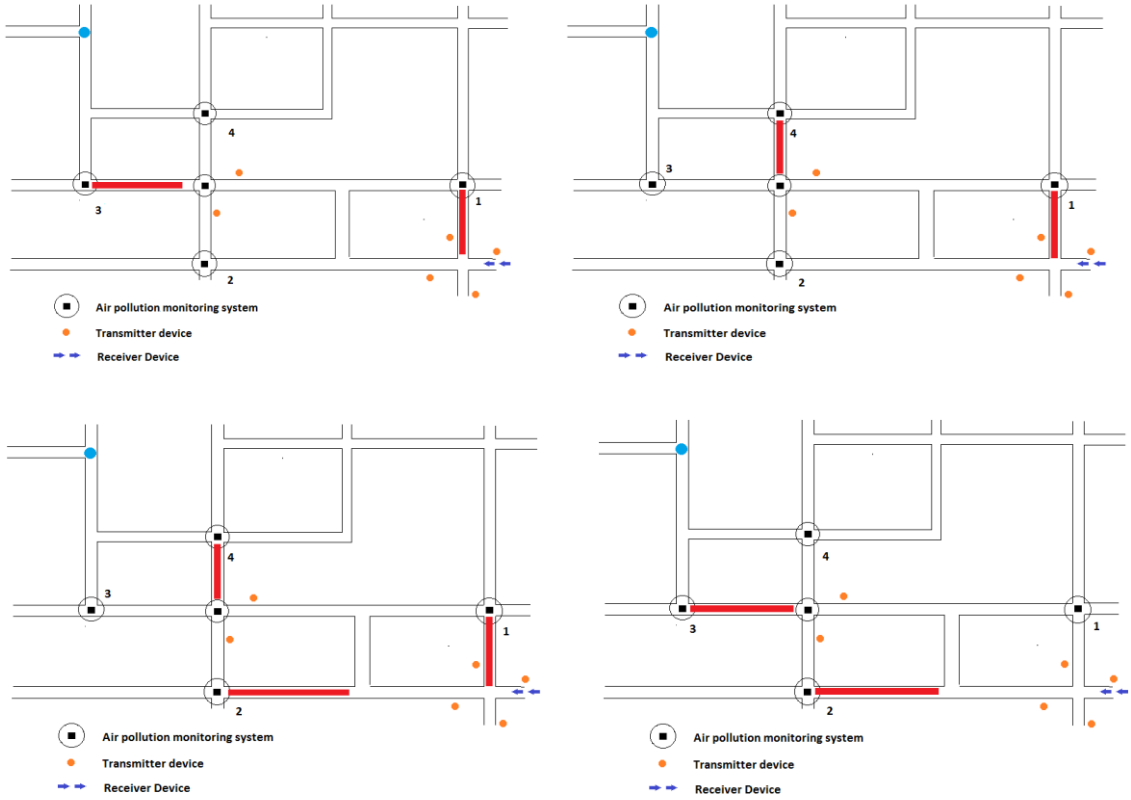
- How it works.....

The Data which are continuous taking from air pollution monitoring system from all points are store in server by using those data continuously update route information of less traffic and less pollution of particular area and this information continuous update on application. Logged in user get information through application.

1) In second method where we develop one transmitter which is taking data directly from air pollution monitoring system and data is about pollution level of certain area where air pollution monitoring system is implement. By using those data it gives information of possible way to go in certain direction or destination, from where it is implement. This transmitter device is implant at nearby area of air pollution monitoring system is.

- How it works….





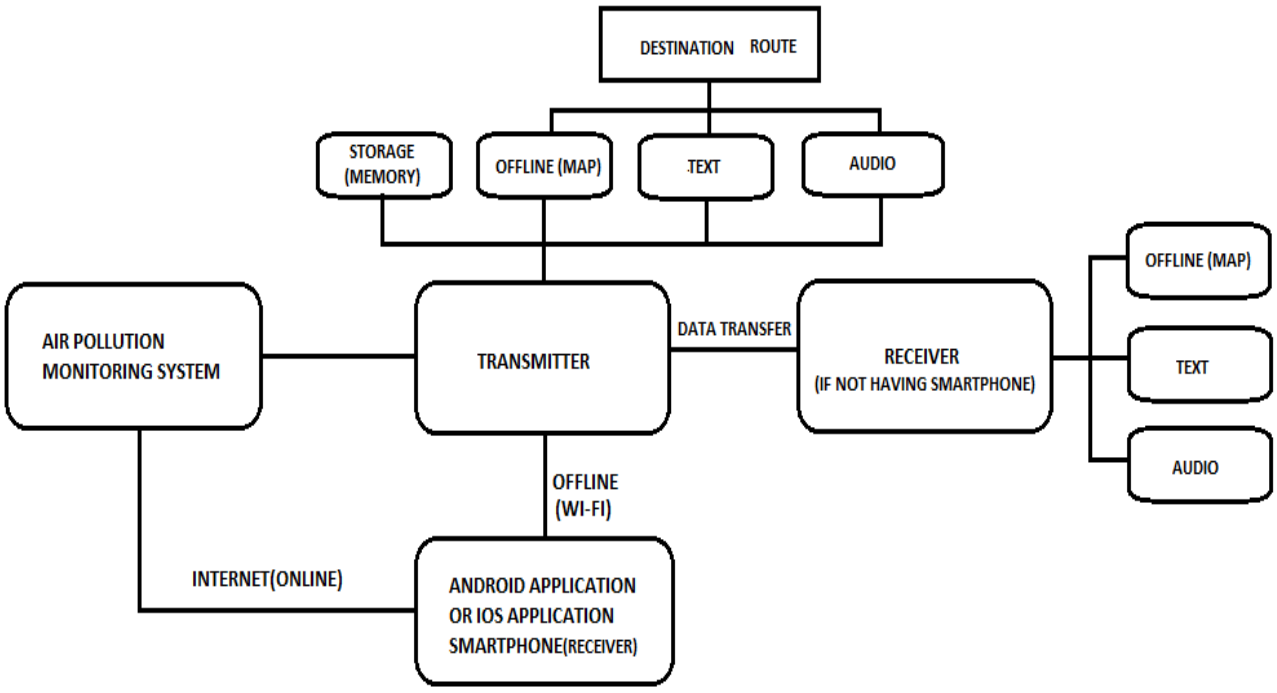
In above diagram receiver (user) passing through range of transmitter and by connect with it receiver take information of traffic and pollution level of nearby area.

We take images of traffic area and modify it by possible condition. Intense to modify images is to trigger the route direction images to user according to pollution level and traffic situation**.** By using

Parameter by which traffic need to be divert:

1) Level of pollution
2) Traffic
3) Situation of area
4) Density of tree

Flow Diagram of Solution:



- **Tools and technologies to be use**:

1) Transmitter:

    1) Wi-fi module (as transmitter)
    2) Memory unit
    3) Embedded processor

2) Receiver:

    1) Wi-fi module (as receiver)
    2) Display
    3) Embedded processor

- ***Possible outcome***:

1) Reduce traffic
2) Balance Air pollution level
3) offline map(user guide)
4) Vehicle tracking

- **Challenges/Risk in implementing your Final prototype:**

This prototype is user dependent because we cannot make certain rule for use this technology. So for they need to aware about Pollution hazard to the environment and health of people. Awareness in people is big Challenge.

And if we are talking about risk so there is no risk to implement is technology. Cost of product is much less so it is easy to purchase.

- **Work done till date::**

First thing we did was to collect information of traffic situation in city (as example "Ahmedabad") for that we analyse available source "google map" which gives the information about live traffic of any area the modification need is pollution based traffic diversion. At present we take example Ahmedabad, so we take images of traffic area of Ahmedabad and modify it by possible condition. Intense to modify images is to trigger the route direction images to user according to pollution level and traffic situation**.**

Now we are working on design of transmitter and receiver
For working purpose we are using raspberry pi and Wi-fi module. Working of it is in progress and our next step is make android and IOS application.