Ahmedabad University

Personalised Air-Quality Monitoring System
Product Requirement Report

Electronic Product Development

By,

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Objective

The objective for the development of the environmental monitoring and surveillance system may differ. Normally, the system will have to provide on-line data and information transfer with a direct/automatically/ on-line quality control of the collected data. Several monitors, sensors and data collection systems may be applied to make on-line data transfer and control possible.(**Dependency** :The air quality monitoring programme design will be dependent upon the monitoring specific objectives specified for the air quality management . Defining the output will help in determining the design of the product and optimise the resources used for monitoring. It will also ensure that the product is customized so that a specific problem can be addressed.)

Personal : develop warning systems for the prevention of undesired values of air components.
Public : The fundamental objective of air quality monitoring device is to collect data that can be used to make informed decisions to best manage and improve the environment.

Features
- lead to an understanding of whether national or regional air quality standards, guidelines, objectives and environmental outcomes are being met, and whether areas of concern are being identified and give Real-time monitoring to remote device.
- supply enough information to determine the population at risk from exposure to poor air quality in order to evaluate the potential and actual health effects in a region (eg, personal exposure assessments).
- detect the importance of individual components in the air and generate alert to mobile device or send mail to respected person
- develop warning systems for the prevention of undesired air pollution episodes for people with specific medical conditions.
- facilitate the background concentration(s) measurements of some specific components.

In short
1. Real-time monitoring of Air-Quality
2. Customized thresholding for concentrations (if required)
3. Generate Alert
4. Remote Viewing(or Public) - the database can be remotely monitored and exported in various formats to the local central authorities and give personalised viewing.

Hardware Requirements

- Arduino/Raspberry pie
- Air Quality Sensors
- Temperature/Humidity Sensor
- Database Software - MySQL
- API of web mapping service
- GPS
- wifi/ ethernet /GSM