Abstract

Due to advances in technology there is trend in miniaturization of devices which demands to develop low cost sensor, low power and rugged devices. In view of this Wireless Sensor Networks (WSN) have gained importance in various applications: Business, Agricultural, Domestic, Industries, Traffic control, and environmental monitoring. The paper presents Wireless sensor network system used to monitor and control the air quality in Solapur city. Environmental air pollution monitoring system that measures, SPM (Suspended Particulate Matter)
Matter), NOx, and SO2 are proposed. The traditional air quality monitoring system, controlled
by the Pollution Control Department, is extremely expensive. Analytical measuring equipment
is costly, time and power consuming, and can seldom be used for air quality reporting in real
time. Attempt has been made to develop monitoring system using commercially available
standard pollutant gas sensors and CC2530ZDK board that uses 2.4 GHz IEEE 802.15.4
standard, high performance low power 8051 core, which will serve as a node in a Wireless
Sensor Network. A specific program made with LabVIEW is created to configure and supervise
the operation and the sensing measurements on the network used.

References

- Sonal. A. Mishra, Dhanashree S. Tijare, Dr. G. M. Asutkar, &quot;Design of energy
  aware air pollution monitoring system using WSN&quot;, International Journal of Advances in
- Prabahkar. P, Bansode P. B and Mujawar. K. C,&quot; An insight into the unseen: A
case study of ambient air quality in Solapur city, Maharashtra, India&quot;, Environmental
- Texas Instrument, CC2530ZDK User Manual
- Texas Instrument, IAR User Manual
- J. TRAVIS, J. KRING (3rd Edition), &quot;LabVIEW for Everyone&quot;, Pearson
  Education, Inc. , India, 2009
- J. Jerome (EE Edition), &quot;Virtual Instrumentation using LabVIEW&quot;, PHI, New
  Delhi, 2010.
- Tajne K. M , Rathore S. S , Asutkar G. M,&quot; Monitoring of Air Pollution using
  Wireless Sensors – A case study of monitoring air pollution in Nagpur city&quot;,;
- Kavi K. Khedo1, Rajiv Perseedoss and Avinash Mungur, &quot;wireless sensor Network
  Air pollution Monitoring system&quot;, International journal of wireless and mobile networks
  Ijwmn, vol2, no2, may2010.

Index Terms

Computer Science
Wireless

Keywords
Wsn  Cc2530zdk  Sensors  Zigbee  Labview.