Abstract

This paper describes the use of wireless sensor network for streetlight monitoring and control. As we look at existing systems the power consumption and maintenance cost of streetlight control department is high. This system would provide an optimal costing for streetlight maintenance and control. System employed use of network processing device (nodes) for sensing of light and then gathered information is used for controlling streetlight ON/OFF or streetlight intensity. Life of Street Lamps depends on the duration for which they get used. In this research, I will try to reduce the required duration for which lamp should be ON, focuses on increasing frequency band for network nodes to get maximum possible data rate and also discuss the parameters required to automatic detection and removal of nodes in the network. This paper also discusses the cost comparison between current system, sensor control system and this system with profile implementation.

References

- De Dominicis, C. M. ; Flammini, A. ; Sisinni, E. ; Fasanotti, L. ; Floreani, F. ; "On the development of a wireless self localizing streetlight monitoring system", Sensors
Wireless Streetlight Control System

- Wu Yue; Shi Changhong; Zhang Xianghong; Yang Wei, "Design of new intelligent street light control system", 8th IEEE international Conferences on Control and Automation (ICCA), (2010), Page(s): 1423 – 1427.
- Hengyu Wu; Minli Tang; Guo Huang, "Design of multi-functional street light control system based on AT89S52 single-chip microcomputer", IEEE 2nd International Conferences on Industrial Mechatronics and Automation (ICIMA), (2010), Page(s): 134 – 137.

- IEEE Std. 802. 15. 1, "Wireless Medium Access Control (MAC) and Physical (PHY)
Specification for Wireless Personal Area Networks (WPANs)," 2002.
- J. A. Gutierrez, M. Naeve, E. Callaway, M. Bourgeois, C. Mitter, and B. Heile,
"IEEE 802. 15. 4: A developing standard for low-power low-cost wireless personal area
- IEEE Std. 802. 11-1997: "Wireless LAN Medium Access Control(MAC) and

**Index Terms**

Computer Science               Wireless

**Keywords**

Jennic Wireless Microcontroller Jn – 5139  Network Processing Device  Streetlight
Supervisory Control