Abstract

This paper focuses and talks about the wide and varied areas of applications wireless sensor networks have taken over today, right from military surveillance and smart home automation to medical and environmental monitoring. It also gives a gist why security is a primary issue of concern even today for the same, discussing the existing solutions along with outlining the security issues and suggesting possible directions of research over the same.

This paper is about the security of wireless sensor networks. These networks create new security threats in comparison to the traditional methods due to some unique characteristics of these networks. A detailed study of the threats, risks and attacks need to be done in order to come up with proper security solutions. Here the paper presents the unique characteristics of these networks and how they pose new security threats. There are several security goals of these networks. These goals and requirements must be kept in mind while designing of security solutions for these networks. It also describes the various attacks that are possible at important layers such as data-link, network, physical and transport layer.
References

2. Wireless Network Security, Yang Xiao, Hui Chen, Shuhui Yang, Yi-Bing Lin, and Ding-Zhu Du. EURASIP Journal on Wireless Communications and Networking
7. WIRELESS SENSOR NETWORK SECURITY ANALYSIS, Hemanta Kumar Kalita, Avijit Kar, International Journal of Next-Generation Networks (IJNGN)
8. A SURVEY ON AUTHENTICATION AND SECURITY MAINTENANCE IN WIRELESS SENSOR NETWORK, Ms.L.Devi., Dr.S.P.Shantharajah, International Journal of Computer Science and Mobile Computing
17. SECURITY IN WIRELESS SENSOR NETWORKS by ADRIAN PERRIG, JOHN STANKOVIC, and DAVID WAGNER COMMUNICATIONS OF THE ACM June 2004/Vol. 47, No. 6


22. SECURITY IN WIRELESS SENSOR NETWORKS: KEY MANAGEMENT MODULE IN SOOAWSN Mohammed A. Abuhelaleh and Khaled M. Elleithy School of Engineering University Of Bridgeport, Bridgeport,CT


24. Wireless Sensor Networks Attacks and Solutions Naser Alajmi Computer Science and Engineering Department, University of BridgeportInternational Journal of Computer Science and Information Security


27. A Survey of Attacks, Security Mechanisms and Challenges in Wireless Sensor Networks Dr. G. Padmavathi, Prof and Head, Dept. of Computer Science Mrs. D. Shanmugapriya, Lecturer, Dept. of Information Technology, Avinashilingam University for Women, Coimbatore, India

28. SECURING WIRELESS SENSOR NETWORKS: A SURVEY YUN ZHOU AND YUGUANG FANG, UNIVERSITY OF FLORIDA YANCHAO ZHANG, NEW JERSEY INSTITUTE OF TECHNOLOGYIEEE communication surveys


Index Terms

Computer Science Security
Keywords

Wireless Sensor Network, sensor nodes, threats, attacks, solutions, security scheme, limitations