Abstract

This paper discusses the structural design of staff positioning techniques in unsafe places in underground mines. This paper also highlights the gains and weaknesses of wireless sensor network technology and addresses an economical, continuous monitoring system of covert mine workers' security. It can realize the effective management of precise positioning of man and machine. This article presents the composition of the system, the enactment and management of network formation. The actual application shows that the ZigBee technology can play an important role in underground personnel information and security management.

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**Index Terms**

Computer Science  Wireless

**Keywords**

ZigBee, RFID, GPS technology, wireless network.