

DYNAMIC WIRELESS SENSOR NETWORKS FOR REAL TIME SAFEGUARD OF WORKERS EXPOSED TO PHYSICAL AGENTS IN CONSTRUCTIONS SITES

ABSTRACT

In this system mobile wireless sensor network (MWSN) implementation is introduced, to monitor the safety conditions of workers employed in the building sector, in particular the exposure to ultraviolet (UV) rays and micro dust particles. These people are potentially at risk to develop different pathologies related to environmental agents.

Overexposition can cause DNA mutations that could result in a skin cancer or other cellular proliferative diseases. Also the exposition to dust particles leads to "dangerous" diseases, as loss of lung function due to cumulative respirable dust exposure, and autoimmune diseases like scleroderma and rheumatoid arthritis related to silica dust exposure

EXISTING SYSTEM

The existing system is using the web cam. It is fixed in each working place to monitor the visually in total place. It is not individual monitoring and this system is not monitoring the pulse so this is informer system.

DISADVANTAGES

- This system is not monitoring the each worker pulse and pressure so we can't avoid the critical stages in employee.

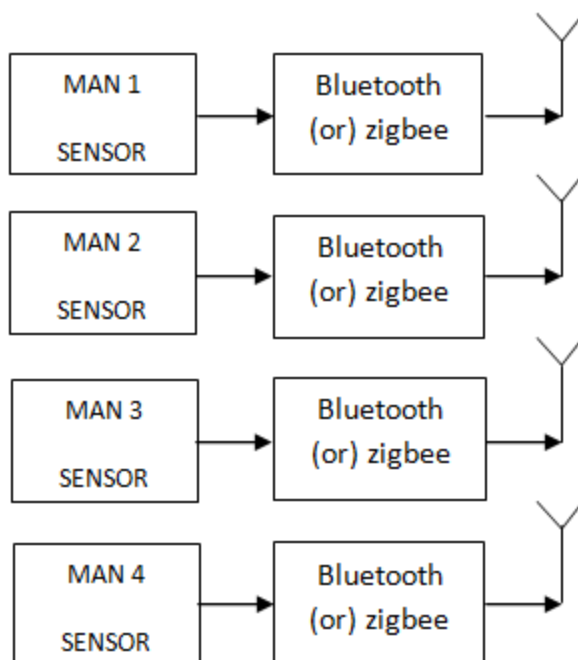
PROPOSED SYSTEM

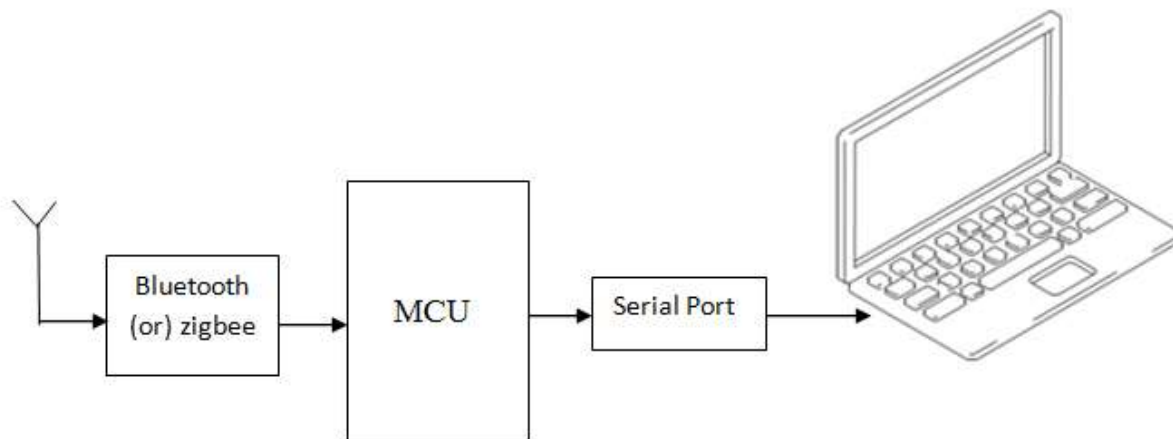
- mobile wireless sensor network (MWSN) implementation is introduced
- The SN is used to detect the physical phenomenon

ADVANTAGES

- This system is a reliable, efficient, inexpensive, and allows a general protection to the device, allowing also its washability.
- Extremely cheap

BLOCK DIAGRAM





HARDWARE REQUIREMENTS

- Sensors
- Bluetooth or zigbee
- Microcontroller
- Serial Port RS232
- Laptop

SOFTWARE REQUIREMENTS

- MCU COMPIERS
- PROTEUS SOFTWARE

MICROCONTROLLER may ATMEGA,8051,PIC OR Arduino