

# **Development of a Wireless Sensor Network System for Early Forest Fire Detection**

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## **Abstract**

This paper presents the development of a wireless sensor network system for early forest detection. The proposed application is based on the Low-Rate Wireless Personal Area Network communications standard IEEE 802.15.4. The core hardware and software components of the developed node prototype network for this domain are described: sensor node hardware, microcontroller programming methodologies and networking. Within the implementation strategies, special attention has been paid to reach an appropriate energy handling, essential to achieve long battery life.