

## **Wireless Sensor Networks TestBed: ASNTbed**

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### **Abstract**

Wireless sensor networks (WSNs) have been used in different types of applications and deployed within various environments. Simulation tools are essential for studying WSNs, especially for exploring large-scale networks. However, WSN testbeds are still required for further testing before the real implementation. In this paper we propose an indoor testbed which is built on the ceiling board of the demonstration room. The purpose of this testbed is to evaluate various types of algorithms and protocols before using them in real world applications. This paper focuses on how to implement such testbed and what are the main challenges that we experienced while implementing the ASNTbed (Advanced Sensor Networks Testbed) and how to solve them. This paper can be considered as a guideline to help other researchers and developers to implement similar testbed.