In this paper we present the results of our research concerned with the implementation and evaluation of a software system for wireless sensor networks localization – High Performance Localization System (HPLS). The system can be used to calculate positions of sensing devices (network nodes) in the deployment area based on known anchor nodes positions and collected measurements of distances between nodes in the network. During our work we had the opportunity to assess localization quality obtained for many networks with different way of gathering distance measurements. In the paper we compare three approaches: very popular method of adding Gaussian noise to real distances, link layer modeling method and RSSI data gathered from real-life deployments. The provided case study demonstrates the differences in localization accuracy depending on more or less realistic assumptions for measurements quality.

Słowa kluczowe: Wireless Sensor Networks, localization, measurements’ error, HPLS, High Performance Localization
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