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Proceedings - 5th International Conference on Computer and Communication Engineering: Emerging Technologies via Comp-Unication Convergence, ICCCE 2014  
 4 February 2015, Article number 7031603, Pages 72-75  
 5th International Conference on Computer and Communication Engineering, ICCCE 2014; Sunway Putra HotelKuala Lumpur; Malaysia; 23 September 2014 through 24 September 2014; Category numberE5413; Code 110844

## RSS based localization techniques for Zigbee wireless sensor network

(Conference Paper)

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### Abstract

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Wireless Sensor Networks (WSN) are implemented in wide range of applications and one of these important applications is the localization and real-time tracking. The accuracy, cost, and power consumption are the most parameter for any proposed technique. Localization in indoor environment is more challenging than outdoor one, since the known Global Positioning System (GPS) is not working probably in indoor environment. In this paper a fingerprinting method for indoor localization is proposed. Real measurements were conducted using IRIS Zigbee motes in indoor environment. Three different configurations are tested where the measurements are conducted at 0, 1 and 1.6 m height. The three dimensional scenarios in the case of 1 m height show more accurate results than two dimensional one. © 2014 IEEE.

### Author keywords

Fingerprinting Indoor localization Wireless sensor networks Zigbee

### Indexed keywords

Engineering controlled terms: Global positioning system Indoor positioning systems Tracking (position) Zigbee

- Fingerprinting
- Fingerprinting methods
- Indoor environment
- Indoor localization
- Real measurements
- Real time tracking
- RSS-based localization

Engineering main heading: Wireless sensor networks

ISBN: 978-147997635-5

DOI: 10.1109/ICCCE.2014.32  
 Document Type: Conference Paper

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