Review 1
Reviewer B
Familiarity Recommendation
Familiar with this area of research (2) Likely reject (2)

Summary (Please provide a summary of the paper (the contents and contribution of the paper). (1-3 sentences))
This paper follows up on the authors' prior work in the area of RSSI-based location in sensor networks.
Strengths (What are the most important reasons to accept this paper (e.g., technical depth, novelty, creative solution, importance of topic, etc.)?)
The authors provide detailed simulation analysis of their proposed algorithm for calibration of RSSI-based location.
Weaknesses (What are the most important reasons NOT to accept this paper?)
The authors mainly compare their results to their own previously-published work and do not address relevant work in the area of sensor location.

Moreover, the paper is organized rather strangely. The authors spend the first half of the paper discussing shortcomings with their previous work, and only discuss related work near the end of the paper.
Comments to authors (Please provide detailed comments to the authors.)
The paper follows up on previous work by the authors in the area of sensor localization based on RSSI measurements. There are a few areas where the paper can be improved:

a) The paper is organized strangely. The first half of the paper (sections 2-3) is dedicated to discussing shortcomings with the authors' previous work. Section 5, a discussion of related work, normally comes at the beginning of most papers. It was rather difficult to read as a result.

b) The authors do not compare their method with other RSSI based localization methods that have been published. For instance, a sensor location method combining RSSI readings with AoA measurements is provided in [1]. in [2], the authors propose iterative processing on an RSSI based sensor measurement scheme to improve location estimation. In [3], the authors use a linear predictive method for calibrating an RSSI-based sensor location system.

[1] "Incorporating Data from Multiple Sensors for Localizing Nodes in Mobile Ad Hoc Networks", by Rui Huang G.V. Zaruba, IEEE Transactions on Mobile Computing, Sept. 2007. [2] " A Belief Propagation-Based Iterative Location Estimation Method for Wireless Sensor Networks", by Rihito Mino et al, IEEE 17th International Symposium on Personal, Indoor and Mobile Radio Communications, 2006. [3] "Mobile user localization in wireless sensor network using grey prediction method", by Ren C. Luo et al, 32nd Annual Conference of IEEE Industrial Electronics Society, 2005.

Review 2
Reviewer C
Familiarity Recommendation
Expert and working in this area of research (3) Accept if room (3)

Summary (Please provide a summary of the paper (the contents and contribution of the paper). (1-3 sentences))
This paper deals with localization of nodes in sensor networks.
Strengths (What are the most important reasons to accept this paper (e.g., technical depth, novelty, creative solution, importance of topic, etc.)?)
Paper is nicely written and semi interesting.
Weaknesses (What are the most important reasons NOT to accept this paper?)
The paper is not very exciting nor provides any real new knowledge.
Comments to authors (Please provide detailed comments to the authors.)
Related works should probably be addressed at the beginning of the paper and some more effort should be placed in finding more relevant papers in the field. The term "same direction" is used loosely and it is unclear at the beginning whether that means that nodes are in the same general direction (and in that case what a general direction is) from a common node or if it means that their own orientation is the same (e.g., their battery's point to the north).

Review 3
Reviewer D
Familiarity Recommendation
Familiar with this area of research (2) Definite reject (1)

Summary (Please provide a summary of the paper (the contents and contribution of the paper). (1-3 sentences))

The paper presents HECOPS a new RSSI based localization based technique. The primary premise is that the 'deviation' or a constant of the (RSSI and the distance between the sender and receiver) is constant for nodes in the same direction.

Strengths (What are the most important reasons to accept this paper (e.g., technical depth, novelty, creative solution, importance of topic, etc.)?)

The authors try to answer an important topic in sensor networks - localization without the need for any special purpose hardware.

Weaknesses (What are the most important reasons NOT to accept this paper?)

The primary formula to calculate deviation (or the constant) is incorrect as RSSI does not decrease monotonically with distance. Hence the derivation of dev = distance*RSSI would not hold as dev is no longer a constant. Moreover the concept of direction is also not valid. It is very possible that two nodes may be in the same 'direction' but may not receive the same RSSI for a message from a common sender. In fact one of them may not receive the message at all given the extremely irregular regions of RSSI coverage. While calculating the direction, how can a node calculate distances from the landmark and the secondary node when it does not have any reference of position in the first place? The paper present ideas which it itself admits that they are not correct. There seems to be no need for discussing concepts which are not correct for about 70% of the paper and then admitting that they are correct. In section 2 no reason has been given for a node having to wait for getting the coordinates of 3 nodes for starting to calculate its position when only two nodes are involved as explained in the paper. No basis has been provided for the 0.75 assigned for landmark and 0.25 for secondary node in the confidence formula. Similarly no reason has been given for the confidence of non-anchor nodes be limited by 0.8. In the simulation section, it is not clear whether this is a simulation or a 'field' deployment. If it is a simulation, what is the need for the authors to write the code in the EPOS OS and then write a wrapper to be able to run in on UNIX workstations and the carry out message passing in memory? The authors could have directly written a custom simulation in C++ or Java or used a readily available simulator like ns2 or Prowler for WSNs. The paper is poorly presented. Some figures are not complete. For example figure 6 does not have a legend. In figure 11, it uses terms like 'our approach for tri'. More appropriate naming schemes could have been used when all the methods in the figure originate from the paper and are in no way standard widely used terms. In figure 12 'new tri' graph is missing. The paper also contradicts itself at times. For example in Section 2, it says that deviation depends on 'direction' while in section 4 it says that deviation depends on distance??? In section 3 the paper says that using a 'confidence system' which the paper itself introduces and discusses extensively in section 2, "introduces further error into estimated distances". What is the use of the system then and why was it introduced. In section 3, the paper mentions about using average of RSSI values. Shouldn't the deviation also be average along with RSSI values? When field experiments are mentioned, it is not the setup of the experiments is not described.

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