The Study on Applying the Mobile Sensors in Tracking and Its Management for the Wireless Sensor Networks

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ABSTRACT

An algorithm by combining sensor scheduling with energy efficient for tracking the maneuvering targets with mobile sensor deployed in WSNs (wireless sensor networks) is proposed and investigated in the article. A simulation by using of the scenario with two maneuvering targets, three maneuvering targets, even more, tracking held to validate the accuracy of the proposed algorithm. Besides, the extended Kalman filter(EKF) method is adopted as the tracking algorithm, by using of the mean square error(MSE) to calculate the position error between the real targets and the tracking targets. Moreover, the simulation results form the numerical analysis illustrate that the proposed algorithm is validated in accuracy.

Keywords : WSNs, EKF, mobile sensors, MSE, maneuvering targets.

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