Applying E-Kalman Filter to Explore the Security Scheme of Base Station in WSN

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ABSTRACT

In this thesis, on the basis of radio signal and the loading conditions of channel capacity for tracking the field pattern of an object. Moreover the EKF (Extended Kalman filter) are adopted as the two algorithms for tracking the maneuvering objects that deployed in the WSNs (wireless sensor networks) environments. In addition, such algorithm is used to track a base station with is deployed in a cellular network. Certainly, the detection, smoothing, and estimation theories of the E-KF are combined to implement the tracking. One reason of the previous description is the requirement for managing the BSs. Furthermore, the system through-out is evaluated from the derived formulas and for certificating the results. The other reason is such developed algorithm which can be used to avoid the attack of the base station in WSN by accident objects. For the purpose of gaining more performance to track maneuvering objects, the results from this thesis are well referenced for the designing in deployment of the mobile sensors with in WSNs.

Keywords : Base station (BS); Cellular Network; Extended Kalman filter (E-KF); QoS; through-put.

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