



HMM-BASED TRACKING OF MOVING TERMINALS IN DENSE MULTIPATH INDOOR ENVIRONMENTS (TueAmOR10)

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★ Abstract :

This paper deals with the problem of radio localization of moving terminals in wideband indoor applications with mixed line-of-sight/non-line-of-sight (LOS/NLOS) conditions. In dense multipath scenarios, the bias introduced by NLOS in angle and/or time of arrival estimates is reduced by employing a Hidden Markov Model (HMM) based algorithm. The proposed algorithm jointly tracks both the mobile station position and the LOS/NLOS conditions exploiting continuity information. Numerical results show that the HMM-based algorithm experiences non meaningful degradation in mixed LOS/NLOS propagation with dense multipath.