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| **Abstract:** |  |
| Recently, several researches consider how to improve estimation accuracy in a time difference of arrival (TDOA) localization system using UWB in a non-line-of-sight (NLOS) environment for medical network. This method consists of step-by-step compensation on the basis of two approaches considering a reference position that is estimated from data affected by NLOS delay. The first consideration consists of determining NLOS delays for each node, performing compensation to alleviate the effect on line of sight (LOS) nodes through a step-by-step compensation for the NLOS delay. The second consideration consists of compensating the effect of NLOS delay on the position determined on the basis of node distribution and geometrical relations of the estimated positions. Using these considerations, we show that the proposed method outperforms the conventional method in terms of estimation accuracy. Finally, the tracking experiment using the prototype is performed, and we show that proposed method exhibits better accuracy than conventional method. | |