

COMPUTER-IMPLEMENTED METHOD AND NON-TRANSITORY COMPUTER- READABLE MEMORY FOR OBJECT LOCALISATION

ABSTRACT

A computer-implemented method (10) for object localisation and a non-transitory
5 computer-readable memory storing computer program instructions executable by one or
more computer processors to perform operations for object localisation are provided.
The computer-implemented method (10) for object localisation includes executing on
one or more processors the steps of: predicting (12) a state vector x_k of an object at
time k , predicting (14) a covariance matrix P_k of the state vector x_k of the object;
10 receiving (16) inertial measurement unit (IMU) data; receiving (18) ultra-wideband (UWB)
data; determining (20) observation residual y_k ; determining (32) an optimal Kalman gain;
and updating (34) the predicted state vector x_k to generate a localization solution L_{est} .

[FIG. 1]