Title (en)

METHOD AND APPARATUS FOR DETECTING A SPEED AND A DISTANCE OF AT LEAST ONE OBJECT WITH RESPECT TO A RECEIVER OF A RECEPTION SIGNAL

Title (de)

VERFAHREN UND VORRICHTUNG ZUM ERKENNEN VON EINER GESCHWINDIGKEIT UND EINER ENTFERNUNG ZUMINDEST EINES OBJEKTS IN BEZUG ZU EINEM EMPFÄNGER EINES EMPFANGSSIGNALS

Title (fr)

PROCÉDÉ ET DISPOSITIF DE DÉTECTION D'UNE VITESSE ET D'UNE DISTANCE D'AU MOINS UN OBJET PAR RAPPORT À UN RÉCEPTEUR D'UN SIGNAL DE RÉCEPTION

Publication

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Application

EP 15748171 A 20150727

Priority

- DE 102014010990 A 20140729
- EP 2015001542 W 20150727

Abstract (en)

[origin: CA2956743A1] The present invention discloses an apparatus (160) for detecting a speed and a distance of at least one object (105a) with respect to a receiver (110a) of a reception signal (120). The apparatus (160) comprises at least one interface (210) for reading in at least one in-phase component (I1) and one quadrature component (Q1) of a plurality of temporally successive reception signals (120) each representing a signal (125) which is reflected to the receiver (110a) at the object (105a) and was emitted at a predefined transmission frequency (f). The apparatus (160) also comprises a unit (220) for forming a first detection value (xvr) using the in-phase component (I1) and the quadrature component (Q1) of a first of the reception signals (120), wherein the first detection value (xvr) corresponds to a predetermined reference speed (v) and a predetermined reference distance (r) of the object (105a) from the receiver (110a). The apparatus (160) also comprises a unit (230) for determining a second detection value (xvr) using the in-phase component (I1) and the quadrature component (Q1) of a second of the reception signals (120), wherein the second detection value (xvr) corresponds to the predetermined reference speed (v) and the predetermined reference distance (r) of the object (105a) from the receiver (110a). Finally, the apparatus (160) comprises a unit (440) for determining a speed (v), corresponding to the reference speed (v), of the object (105a) with respect to the receiver (110a) and the reference distance (r) as the distance of the object (105a) with respect to the receiver (110a) using the first and second detection values (xvr).

IPC 8 full level

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Citation (search report)

See references of WO 2016015853A1

Citation (examination)

- DE 102009016479 A1 20101014 - CONTI TEMIC MICROELECTRONIC [DE]
- US 2009085796 A1 20090402 - KURODA HIROSHI [JP], et al
- JP 2009042061 A 20090226 - HITACHI LTD

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