

Title (en)
METHOD AND DEVICE FOR DETERMINING A RADAR CROSS SECTION, METHOD FOR TRAINING AN INTERACTION MODEL, AND RADAR TARGET EMULATOR AND TEST FACILITY

Title (de)
VERFAHREN UND VORRICHTUNG ZUM ERMITTELN EINES RADARQUERSCHNITTS, VERFAHREN ZUM TRAINIEREN EINES WECHSELWIRKUNGSMODELLS SOWIE RADARZIELEMULATOR UND PRÜFSTAND

Title (fr)
PROCÉDÉ ET DISPOSITIF POUR DÉTERMINER UNE SURFACE ÉQUIVALENTE RADAR, PROCÉDÉ POUR FORMER UN MODÈLE D'INTERACTION ET ÉMULATEUR DE CIBLE RADAR ET BANC D'ESSAI

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Abstract (en)
[origin: WO2019195872A1] The present invention relates to a method (1a) and a device (4) for determining a radar cross section (σ), a method (1b) for training an interaction model (W), a radar target emulator (10) for manipulating a radar signal, and a test facility (100) for a vehicle (2). The propagation of a virtual radar signal (V) is simulated on the basis of an interaction model (W) in a simulated environment scenario that contains the simulated radar target (Z). In this case, an interaction of the virtual radar signal (V) with the simulated radar target (Z) is modelled such that a physical variable, characterizing the virtual radar signal (V), is divided into a directional component (Ga) that corresponds to a directed scattering of the virtual radar signal (V) and into a diffuse component (Gb) that corresponds to an isotropic scattering of the virtual radar signal (V). A value (G) of the physical variable is determined at a receiver point (E) in the simulated environment scenario, taking into account the directional component (Ga) and the diffuse component (Gb), and the radar cross section (σ) of the simulated radar target (Z) is derived from the determined value (G) of the physical variable at the receiver point (E).

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