

Title (en)

TARGET DETECTION METHOD FOR GROUND-PENETRATING RADAR AND ASSOCIATED RADAR

Title (de)

ZIELDETEKTIONSVERFAHREN FÜR BODENRADAR UND ZUGEHÖRIGER RADAR

Title (fr)

PROCEDE DE DETECTION DE CIBLE POUR RADAR A PENETRATION DE SOL ET RADAR ASSOCIE

Publication

EP 4172655 A1 20230503 (FR)

Application

EP 21733471 A 20210622

Priority

- FR 2006870 A 20200630
- EP 2021067038 W 20210622

Abstract (en)

[origin: WO2022002700A1] The invention relates to a method for detecting at least one target buried in an area of the ground, using ground-penetrating radar, the method comprising the steps of: - acquiring (201) a measurement of a signal transmitted by each transmission antenna and reflected in the area of the ground; - determining (202) an estimate, in the frequency domain, of the propagation channel for each pair consisting of a transmission antenna and a reception antenna; - defining a first hypothesis H0 corresponding to the absence of a target in the area of the ground; - defining a second hypothesis H1 corresponding to the presence of at least one target in the area of the ground; - performing (203) a test of the likelihood ratio between the likelihood of the channel matrix under the second hypothesis H1 and the likelihood of the channel matrix under the first hypothesis H0, in order to conclude that a target is present at a given position in the area of the ground.

IPC 8 full level

G01S 13/88 (2006.01); **G01S 7/41** (2006.01)

CPC (source: EP US)

G01S 7/411 (2013.01 - US); **G01S 7/414** (2013.01 - EP); **G01S 13/885** (2013.01 - EP US)

Citation (search report)

See references of WO 2022002700A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

FR 3111994 A1 20211231; **FR 3111994 B1 20230224**; EP 4172655 A1 20230503; US 2023266461 A1 20230824; WO 2022002700 A1 20220106

DOCDB simple family (application)

FR 2006870 A 20200630; EP 2021067038 W 20210622; EP 21733471 A 20210622; US 202118012965 A 20210622