

Title (en)
POSITION OR ORIENTATION DETERMINATION BASED ON DUTY-CYCLED FREQUENCY MULTIPLEXED ELECTROMAGNETIC SIGNALS

Title (de)
POSITIONS- ODER AUSRICHTUNGSBESTIMMUNG AUF BASIS VON ZYKLISCHEN FREQUENZMULTIPLEXIERTEN
ELEKTROMAGNETISCHEN SIGNALEN

Title (fr)
DÉTERMINATION DE POSITION OU D'ORIENTATION FONDÉE SUR DES SIGNAUX ÉLECTROMAGNÉTIQUES MULTIPLEXÉS EN
FRÉQUENCE À CYCLE DE SERVICE

Publication
EP 3548912 A1 20191009 (EN)

Application
EP 17781239 A 20170920

Priority
• US 201615364192 A 20161129
• US 2017052523 W 20170920

Abstract (en)
[origin: CN108120440A] The invention relates to position or orientation determination based on duty-cycled frequency multiplexed electromagnetic signals. A three-axis magnetic source (110) generates the frequency multiplexed electromagnetic signals for transmission at a first power and a second power during respective first and second subsets (406, 407) of time intervals defined by a duty cycle. The first power is higher than the second power. A position or an orientation of a three-axis magnetic sensor (105) relative to the three-axis magnetic source is determined based on the frequency multiplexed electromagnetic signals received by the three-axis magnetic sensor at the first power during the first subset of time intervals. In some cases, the three-axis magnetic source includes orthogonal coils (111, 112, 113) and a power supply (125) alternately applying higher and lower powers to drive the orthogonal coils to generate the frequency multiplexed electromagnetic signals.

IPC 8 full level
G01R 35/00 (2006.01); **G01D 5/20** (2006.01); **G01R 33/00** (2006.01); **G01R 33/02** (2006.01)

CPC (source: CN EP GB)
G01B 7/004 (2013.01 - GB); **G01C 21/18** (2013.01 - CN); **G01D 5/145** (2013.01 - EP GB); **G01R 33/0029** (2013.01 - EP);
G01R 33/02 (2013.01 - EP); **G01R 35/005** (2013.01 - EP)

Citation (search report)
See references of WO 2018102009A1

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

DOCDB simple family (publication)
DE 202017105884 U1 20180416; CN 108120440 A 20180605; DE 102017122456 A1 20180530; EP 3548912 A1 20191009;
GB 201715626 D0 20171108; GB 2557401 A 20180620; GB 2557401 B 20200603; WO 2018102009 A1 20180607

DOCDB simple family (application)
DE 202017105884 U 20170927; CN 201710906011 A 20170929; DE 102017122456 A 20170927; EP 17781239 A 20170920;
GB 201715626 A 20170927; US 2017052523 W 20170920