

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

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Application  
**EP 17781239 A 20170920**

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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.

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