

Title (en)

DETERMINATION OF THE FUNDAMENTAL FREQUENCY OF A PERIODIC SIGNAL INCLUDING HARMONIC COMPONENTS

Title (de)

BESTIMMUNG DER GRUNDFREQUENZ EINES PERIODISCHEN SIGNALS MIT HARMONISCHEN KOMPONENTEN

Title (fr)

DETERMINATION DE LA FREQUENCE FONDAMENTALE D'UN SIGNAL PERIODIQUE INCLUANT DES COMPOSANTES HARMONIQUES

Publication

**EP 2598898 A1 20130605 (FR)**

Application

**EP 11743292 A 20110705**

Priority

- FR 1056295 A 20100730
- FR 2011051575 W 20110705

Abstract (en)

[origin: WO2012013883A1] The invention relates to a method for determining the fundamental frequency of a periodic signal including harmonic components, comprising: calculating, during a first rough estimation (200) of the fundamental frequency and from samples of the signal, a first estimated value of the fundamental frequency, said value being expressed in a frequency unit that is selected such that the entire portion of the first estimated value comprises at most three digits; and then using a step (300) of estimating the fundamental frequency to the nearest tenth, in said unit, in order to determine, from said first value, a second estimated value, in said unit, of the fundamental frequency to the nearest tenth, by searching, from among a first set of possible frequency values corresponding to variations, at a constant spacing of 0.1, in the estimated first value, for a first frequency value for which the corresponding signal amplitude, calculated from the discrete Fourier coefficients of rank 1, is at a maximum. Similar additional steps (400; 500) can then be used to obtain an estimate of the fundamental frequency to the nearest hundredth, in said unit, and then to the nearest thousandth, in said unit, respectively.

IPC 8 full level

**G01R 19/25** (2006.01); **G01R 23/02** (2006.01)

CPC (source: EP)

**G01R 23/02** (2013.01); **G01R 19/2506** (2013.01); **G01R 19/2513** (2013.01); **G01R 23/15** (2013.01)

Citation (search report)

See references of WO 2012013883A1

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

DOCDB simple family (publication)

**WO 2012013883 A1 20120202**; AU 2011284588 A1 20130307; AU 2011284588 B2 20140703; BR 112013002288 A2 20190924; EP 2598898 A1 20130605; FR 2963433 A1 20120203; FR 2963433 B1 20120727

DOCDB simple family (application)

**FR 2011051575 W 20110705**; AU 2011284588 A 20110705; BR 112013002288 A 20110705; EP 11743292 A 20110705; FR 1056295 A 20100730