

Title (en)

IMPROVED FREQUENCY BAND EXTENSION IN AN AUDIO SIGNAL DECODER

Title (de)

VERBESSERTE FREQUENZBANDERWEITERUNG IN EINEM AUDIOSIGNALDECODIERER

Title (fr)

EXTENSION AMELIORÉE DE BANDE DE FRÉQUENCE DANS UN DÉCODEUR DE SIGNAUX AUDIOFRÉQUENCES

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Application

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Abstract (en)

[origin: WO2015118260A1] The invention relates to a method for extending the frequency band of an audio signal during a decoding or improvement process, comprising a step of obtaining the decoded signal in a first frequency band, referred to as a low band. The method is such that it comprises the steps of: extracting (E402) tonal components and a surround signal from a signal from the low-band signal, combining (E403) tonal components and the surround signal by adaptive mixing using energy-level control factors to obtain an audio signal, referred to as a combined signal, extending (E401a) the low-band decoded signal before the extraction step or the combined signal after the combination step over at least one second frequency band which is higher than the first frequency band. The invention also relates to a frequency-band extension device which implements the described method and to a decoder comprising a device of this type.

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FR 2015050257 W 20150204; BR 112016017616 A 20150204; BR 122017027991 A 20150204; CN 201580007250 A 20150204; CN 201711459695 A 20150204; CN 201711459701 A 20150204; CN 201711459702 A 20150204; DK 15705687 T 20150204; DK 17206563 T 20150204; EP 15705687 A 20150204; EP 17206563 A 20150204; EP 17206567 A 20150204; EP 17206569 A 20150204; ES 15705687 T 20150204; ES 17206563 T 20150204; FI 17206563 T 20150204; FR 1450969 A 20140207; HR P20211187 T 20210723; HR P20231164 T 20150204; HU E15705687 A 20150204; HU E17206563 A 20150204; JP 2016549732 A 20150204; JP 2019107007 A 20190607; JP 2019107008 A 20190607; JP 2019107009 A 20190607; KR 20167024350 A 20150204; KR 20177037700 A 20150204; KR 20177037706 A 20150204; KR 20177037710 A 20150204; KR 20227007471 A 20150204; LT 15705687 T 20150204; LT 17206563 T 20150204; MX 2016010214 A 20150204; PL 15705687 T 20150204; PL 17206563 T 20150204; PT 15705687 T 20150204; PT 17206563 T 20150204; RS P20210945 A 20150204; RS P20230844 A 20150204; RU 2016136008 A 20150204; RU 2017144521 A 20150204; RU 2017144522 A 20150204; RU 2017144523 A 20150204; SI 201531646 T 20150204; SI 201531958 T 20150204; US 201515117100 A 20150204; US 201815869560 A 20180112; US 201816011153 A 20180618; US 202016926818 A 20200713; US 202016939104 A 20200727; ZA 201606173 A 20160906; ZA 201708366 A 20171211; ZA 201708368 A 20171211