

Title (en)

IMPROVED FREQUENCY BAND EXTENSION IN AN AUDIO FREQUENCY SIGNAL DECODER

Title (de)

VERBESSERTE AUSDEHNUNG EINES FREQUENZBANDS IN EINEM DEKODIERER VON AUDIOFREQUENZSIGNALEN

Title (fr)

EXTENSION AMÉLIORÉE 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.

Abstract (fr)

L'invention se rapporte à un procédé d'extension de bande de fréquence d'un signal audiofréquence lors d'un processus de décodage ou d'amélioration comportant une étape d'obtention du signal décodé dans une première bande de fréquence dite bande basse, le procédé étant caractérisé en ce qu'il comporte les étapes suivantes : - Extraction (E402) de composantes tonales et d'un signal d'ambiance à partir du signal issu du signal bande basse décodé ; - Combinaison (E403) des composantes tonales et du signal d'ambiance par mixage adaptatif utilisant des facteurs de contrôle de niveau d'énergie pour obtenir un signal audio, dit combiné ; - Extension (E401a) sur au moins une deuxième bande de fréquence supérieure à la première bande de fréquence du signal décodé bande basse avant l'étape d'extraction pour former un signal bande basse décodé étendu U HB 1 (k), et selon lequel l'étape d'extraction (E402) des composantes tonales et du signal d'ambiance comporte les opérations suivantes : (a) calcul de l'énergie tonale du signal de bande basse décodé étendu ; (b) calcul de l'ambiance en valeur absolue correspondant au niveau moyen du spectre raie par raie et calcul de l'énergie des parties tonales dominantes dans le spectre hautes fréquences. L'invention se rapporte également à un dispositif d'extension de bande de fréquence mettant en oeuvre le procédé décrit et un décodeur comportant un tel dispositif.

IPC 8 full level

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