**PATENT N°: US 7529660 B2** 

Jurisdiction: US

Names of the Evaluators		
Lead Evaluator	Assistant Evaluator #1	Assistant Evaluator #2
Allen RUBENSTEIN	Jochen EHLERS	Kan ZU

The above mentioned Evaluators hereby declare that the following claim(s):

- Claim 1
- Claim 29

in the above referenced patent, is(are) essential to making, using in, selling within, or importing into, the countries of registration, any 3GPP product (the applicable Product Categories are given below) that is or purports to be in compliance with the following parts of the Third Generation Partnership Program (3GPP) technical standards:

- Document 3GPP TS 26.445 V12.0.0 (2014-09): Section 6.1.4.2

Claim 1 is relevant for 3GPP Terminal Products and 3GPP Base Station Products. Claim 29 is relevant for 3GPP Terminal Products and 3GPP Base Station Products.

Authorized signature and date

June 20, 2017

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# (12) United States Patent Bessette et al.

## (54) METHOD AND DEVICE FOR FREQUENCY-SELECTIVE PITCH ENHANCEMENT OF SYNTHESIZED SPEECH

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(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35

U.S.C. 154(b) by 873 days.

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(51) Int. Cl.

*G10L 19/02* (2006.01) *G10L 21/02* (2006.01)

(52) **U.S. Cl.** ...... **704/205**; 704/207; 704/502

## (10) Patent No.: US 7,529,660 B2 (45) Date of Patent: May 5, 2009

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#### (57) ABSTRACT

In a method and device for post-processing a decoded sound signal in view of enhancing a perceived quality of this decoded sound signal, the decoded sound signal is divided into a plurality of frequency sub-band signals, and post-processing is applied to at least one of the frequency sub-band signal. After post-processing of this at least one frequency sub-band signal, the frequency sub-band signals may be added to produce an output post-processed decoded sound signal. In this manner, the post-processing can be localized to a desired sub-band or sub-bands with leaving other sub-bands virtually unaltered.

### 58 Claims, 11 Drawing Sheets

