



(11) **EP 3 602 553 B8**

(12) **CORRECTED EUROPEAN PATENT SPECIFICATION**

(15) Correction information:  
**Corrected version no 1 (W1 B1)**  
**Corrections, see**  
**Bibliography INID code(s) 72**

(48) Corrigendum issued on:  
**02.11.2022 Bulletin 2022/44**

(45) Date of publication and mention  
of the grant of the patent:  
**27.04.2022 Bulletin 2022/17**

(21) Application number: **18714687.3**

(22) Date of filing: **29.03.2018**

(51) International Patent Classification (IPC):  
**G10L 21/038** <sup>(2013.01)</sup> **G10L 25/69** <sup>(2013.01)</sup>

(52) Cooperative Patent Classification (CPC):  
**G10L 25/69; G10L 21/038**

(86) International application number:  
**PCT/EP2018/025082**

(87) International publication number:  
**WO 2018/177611 (04.10.2018 Gazette 2018/40)**

---

(54) **APPARATUS AND METHOD FOR PROCESSING AN AUDIO SIGNAL**

VORRICHTUNG UND VERFAHREN ZUR VERARBEITUNG EINES AUDIOSIGNALS

APPAREIL ET PROCÉDÉ DE TRAITEMENT D'UN SIGNAL AUDIO

---

(84) Designated Contracting States:  
**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**

(30) Priority: **31.03.2017 EP 17164360**  
**07.09.2017 EP 17189999**

(43) Date of publication of application:  
**05.02.2020 Bulletin 2020/06**

(73) Proprietor: **Fraunhofer-Gesellschaft zur**  
**Förderung**  
**der angewandten Forschung e.V.**  
**80686 München (DE)**

(72) Inventors:  
• **GAMPP, Patrick**  
**91054 Erlangen (DE)**  
• **UHLE, Christian**  
**92289 Ursensollen (DE)**  
• **DISCH, Sascha**  
**90766 Fürth (DE)**  
• **KARAMPOURNIOTIS, Antonios**  
**90429 Nurnberg (DE)**  
• **HAVENSTEIN, Julia**  
**90443 Nurnberg (DE)**

• **HELLMUTH, Oliver**  
**91054 Buckenhof (DE)**  
• **HERRE, Jürgen**  
**91054 Erlangen (DE)**  
• **PROKEIN, Peter**  
**91056 Erlangen (DE)**

(74) Representative: **König, Andreas Rudolf et al**  
**Schoppe, Zimmermann, Stöckeler**  
**Zinkler, Schenk & Partner mbB**  
**Patentanwälte**  
**Radlkofersstraße 2**  
**81373 München (DE)**

(56) References cited:  
**US-A1- 2011 075 832 US-A1- 2016 329 061**

• **Patrick Gampp ET AL: "Methods for Low Bitrate**  
**Coding Enhancement Part I: Spectral**  
**restoration", 2017 AES International Conference**  
**on Automotive Audio, 29 August 2017**  
**(2017-08-29), pages 1-8, XP055454104, Retrieved**  
**from the Internet:**  
**URL: <http://www.aes.org/e-lib/inst/download.cfm/19193.pdf?ID=19193> [retrieved on 2018-02-26]**

---

Note: Within nine months of the publication of the mention of the grant of the European patent in the European Patent Bulletin, any person may give notice to the European Patent Office of opposition to that patent, in accordance with the Implementing Regulations. Notice of opposition shall not be deemed to have been filed until the opposition fee has been paid. (Art. 99(1) European Patent Convention).

---

**EP 3 602 553 B8**

- **LAITINEN MIKKO-VILLE ET AL: "Phase Derivative Correction of Bandwidth-Extended Signals for Perceptual Audio Codecs", AES CONVENTION 140; MAY 2016, AES, 60 EAST 42ND STREET, ROOM 2520 NEW YORK 10165-2520, USA, 26 May 2016 (2016-05-26), XP040680719,**