

(51) International Patent Classification:
G10L 19/14 (2006.01)(21) International Application Number:
PCT/EP2009/001707(22) International Filing Date:
10 March 2009 (10.03.2009)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/038,300 20 March 2008 (20.03.2008) US
08015123.6 27 August 2008 (27.08.2008) EP(71) Applicant (for all designated States except US):
**FRAUNHOFER-GESELLSCHAFT ZUR
FÖRDERUNG DER ANGEWANDTEN
FORSCHUNG E.V.** [DE/DE]; Hansastraße 27c, 80686
München (DE).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **DISCH, Sascha** [DE/
DE]; Turnstr. 7, 90763 Fuerth (DE).(74) Agent: **ZINKLER, Franz; SCHOPPE, ZIMMER-
MANN, STÖCKELER & ZINKLER**, Postfach 246,
82043 Pullach bei München (DE).(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ,
CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ,
EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN,
HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR,
KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME,
MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO,
NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG,
SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA,
UG, US, UZ, VC, VN, ZA, ZM, ZW.(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ,
TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV,
MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR),
OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
MR, NE, SN, TD, TG).

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments (Rule 48.2(h))

[Continued on next page]

(54) Title: APPARATUS AND METHOD FOR CONVERTING AN AUDIO SIGNAL INTO A PARAMETERIZED REPRESENTATION, APPARATUS AND METHOD FOR MODIFYING A PARAMETERIZED REPRESENTATION, APPARATUS AND METHOD FOR SYNTHESIZING A PARAMETERIZED REPRESENTATION OF AN AUDIO SIGNAL

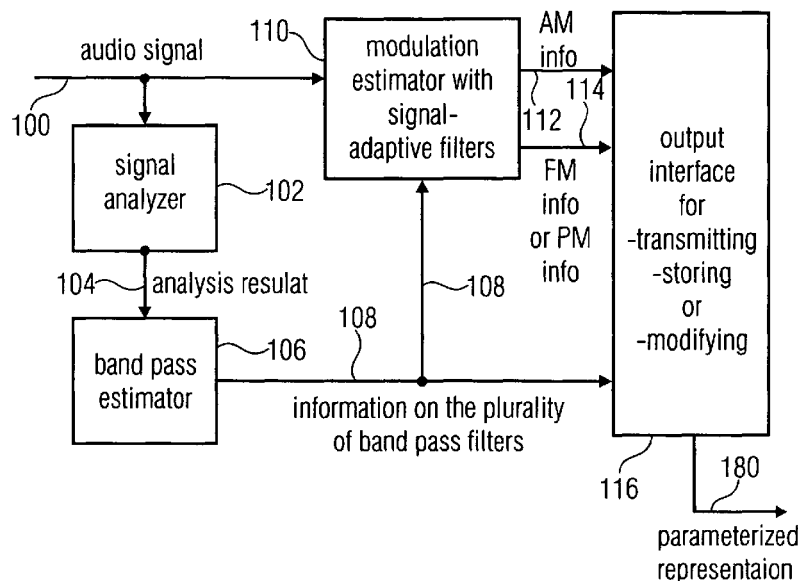


FIG 1A

(57) Abstract: Apparatus for converting an audio signal into a parameterized representation, comprises a signal analyzer (102) for analyzing a portion of the audio signal to obtain an analysis result; a band pass estimator (106) for estimating information of a plurality of band pass filters based on the analysis result, wherein the information on the plurality of band pass filters comprises information on a filter shape for the portion of the audio signal, wherein the band width of a band pass filter is different over an audio spectrum and depends on the center frequency of the band pass filter; a modulation estimator (110) for estimating an amplitude modulation (112) or a frequency modulation (114) or a phase modulation for each band of the plurality of band pass filters for the portion of the audio signal using the information on the plurality of band pass filters; and an output interface (116) for transmitting, storing or modifying information on the amplitude modulation, information on the frequency modulation or phase modulation or the information on the plurality of band pass filters for the portion of the audio

signal.



(88) Date of publication of the international search report:
19 August 2010