(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
8 May 2008 (08.05.2008)

PCT

(10) International Publication Number
WO 2008/052627 A1

(51) International Patent Classification:
G10L 19/14 (2006.01)

(21) International Application Number:
PCT/EP2007/008477

(22) International Filing Date:
28 September 2007 (28.09.2007)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10 2006 051 673.7
2 November 2006 (02.11.2006) DE

(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) Inventors; and

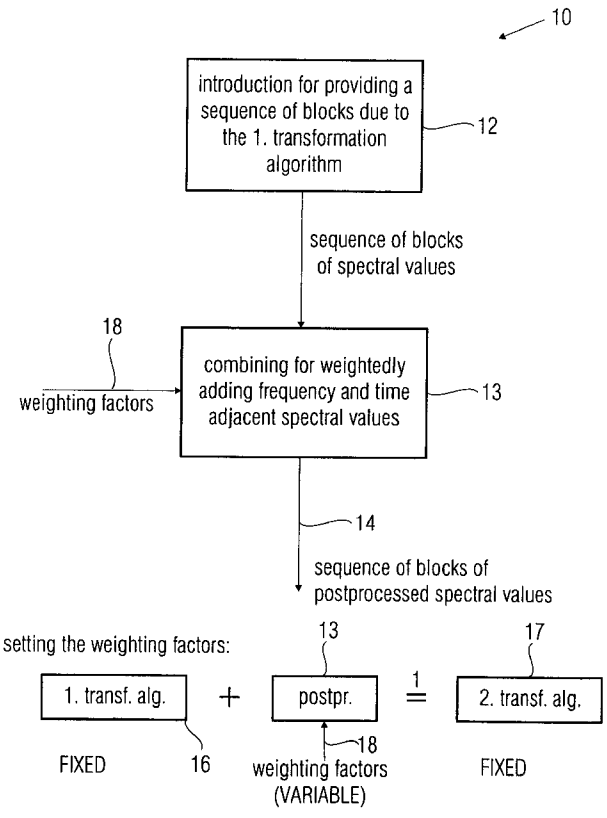
(75) Inventors/Applicants *(for US only)*: **EDLER, Bernd** [DE/DE]; Hemelingstr. 10, 30419 Hannover (DE). **GEIGER, Ralf** [DE/DE]; Taeublingstr. 35, 91058 Erlangen (DE). **ERTEL, Christian** [DE/DE]; Gartenstr. 15, 91338 Igensdorf (DE). **HILPERT, Johannes** [DE/DE]; Herrnhuettestrasse 46, 90411 Nuernberg (DE). **POPP, Harald** [DE/DE]; Obermichelbacherstr. 18, 90587 Tuchenbach (DE).

(74) Agents: **ZINKLER, Franz** et al.; Schoppe, Zimmermann, Stöckeler & Zinkler, P.o. Box 246, 82043 München (DE).

(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, 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, SV, SY,

[Continued on next page]

(54) Title: DEVICE AND METHOD FOR POSTPROCESSING SPECTRAL VALUES AND ENCODER AND DECODER FOR AUDIO SIGNALS



(57) Abstract: For postprocessing spectral values which are based on a first transformation algorithm for Converting the audio Signal into a spectral representation, first a sequence of blocks of the spectral values representing a sequence of blocks of samples of the audio signal are provided. Hereupon, a weighted addition of spectral values of the sequence of blocks of spectral values is performed in order to obtain a sequence of blocks of postprocessed spectral values, wherein the combination is performed such that for calculating a postprocessed spectral value for a frequency band and a time duration a spectral value of the sequence of blocks for the frequency band and the time duration and a spectral value for another frequency band or another time duration are used, wherein the combination is further performed such that such weighting factors are used that the postprocessed spectral values are an approximation to the spectral values as they are obtained by converting the audio signal into a spectral representation using a second transformation algorithm which is different from the first transformation algorithm. The postprocessed spectral values are in particular used for a difference formation within a scalable encoder or for an addition within a scalable decoder, respectively.

WO 2008/052627 A1

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, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, 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*