

05/11/03
200 30 6 5497

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

CORRECTED VERSION

(19) World Intellectual Property Organization
International Bureau



162162

(43) International Publication Date
5 December 2002 (05.12.2002)

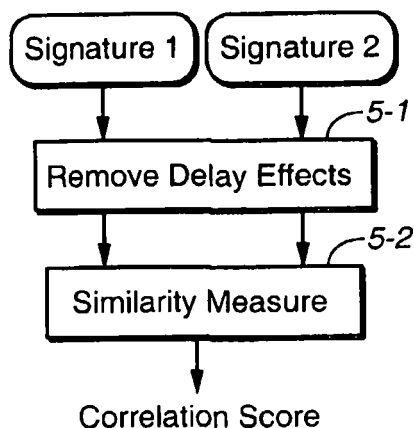
PCT

(10) International Publication Number
WO 02/097790 A1

- (51) International Patent Classification⁷: **G10L 11/00**
- (21) International Application Number: PCT/US02/05329
- (22) International Filing Date: 22 February 2002 (22.02.2002)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/293,825 25 May 2001 (25.05.2001) US
10/045,644 11 January 2002 (11.01.2002) US
60/351,498 23 January 2002 (23.01.2002) US
PCT/US02/04317 12 February 2002 (12.02.2002) US
- (63) Related by continuation (CON) or continuation-in-part (CIP) to earlier applications:
US 60/293,825 (CIP)
Filed on 25 May 2001 (25.05.2001)
US 60/351,498 (CIP)
Filed on 23 January 2002 (23.01.2002)
US 10/045,644 (CIP)
Filed on 11 January 2002 (11.01.2002)
US PCT/US02/ (CIP)
Filed on 12 February 2002 (12.02.2002)
- (71) Applicant (for all designated States except US): **DOLBY LABORATORIES LICENSING CORPORATION** [US/US]; 100 Potrero Avenue, San Francisco, CA 94103 (US).
- (72) Inventors; and
(75) Inventors/Applicants (for US only): **CROCKETT, Brett, G.** [US/US]; 100 Potrero Avenue, San Francisco, CA 94103 (US). **SMITHERS, Michael, J.** [AU/US]; 100 Potrero Avenue, San Francisco, CA 94103 (US).
- (74) Agents: **GALLACHER, Thomas, A.** et al.; Gallagher & Lathrop, A Professional Corporation, 601 California Street, Suite 1111, San Francisco, CA 94108-2805 (US).
- (81) Designated States (national): AE, AG, AL, AM, AT (utility model), AT, AU (petty patent), AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ (utility model), CZ, DE (utility model), DE, DK (utility model), DK, DM, DZ, EC, EE (utility model), EE, ES, FI (utility model), FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK (utility model), SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:
— with international search report

[Continued on next page]

(54) Title: COMPARING AUDIO USING CHARACTERIZATIONS BASED ON AUDITORY EVENTS



(57) Abstract: A method for determining if one audio signal is derived from another audio signal or if two audio signals are derived from the same audio signal compares reduced-information characterizations of said audio signals, wherein said characterizations are based on auditory scene analysis. The comparison removes from the characterisations or minimizes in the characterisations the effect of temporal shift or delay on the audio signals(5-1), calculates a measure of similarity(5-2), and compares the measure of similarity against a threshold. In one alternative, the effect of temporal shift or delay is removed or minimized by cross-correlating the two characterizations. In another alternative, the effect of temporal shift or delay is removed or minimized by transforming the characterizations into a domain that is independent of temporal delay effects, such as the frequency domain. In both cases, a measure of similarity is calculated by calculating a coefficient of correlation.



ACTION

(48) Date of publication of this corrected version:

31 July 2003

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(15) Information about Correction:

see PCT Gazette No. 31/2003 of 31 July 2003, Section II