

Title (en)

System and method for separation of sound sources in a three-dimensional space

Title (de)

System und Verfahren zum Trennen von Schallquellen in einem dreidimensionalen Raum

Title (fr)

Système et procédé de séparation de sources acoustiques dans un espace tridimensionnel

Publication

**EP 2988302 A1 20160224 (EN)**

Application

**EP 14461562 A 20140821**

Priority

EP 14461562 A 20140821

Abstract (en)

A method for sound source separation using a linear microphone array, the method comprising the steps of: calculating distance of each microphone of the microphone array to a known location of a target that is to be sampled; for each microphone calculating a delay with which sound reaches the given microphone from a given location in space; identifying a microphone having the lowest value of the delay and subtracting this value from values of delays of all other microphones; calculating a sound sample for a given location in space by adding sound samples from all microphones while taking into account the respective delays.

IPC 8 full level

**G10L 21/028** (2013.01)

CPC (source: EP)

**G10L 21/028** (2013.01); **H04R 3/005** (2013.01); **H04R 1/406** (2013.01); **H04R 2201/405** (2013.01)

Citation (applicant)

- US 7047189 B2 20060516 - ACERO ALEJANDRO [US], et al
- US 2011075860 A1 20110331 - NAKAGAWA HIROSHI [JP], et al

Citation (search report)

- [X] US 2012155703 A1 20120621 - HERNANDEZ-ABREGO GUSTAVO [US], et al
- [X] PATTARAPONG ROJANASTHIEN: "Microphone Array and Beamforming", ECE5525 SPEECH PROCESSING FINAL PRESENTATION, 8 December 2008 (2008-12-08), XP055163602, Retrieved from the Internet <URL:http://my.fit.edu/~vkepuska/ece5525/Projects/Fall2008/PattarapongRojanasthien/Rojanasthien.doc> [retrieved on 20150120]
- [X] IVAN HIMAWAN ET AL: "Dealing with uncertainty in microphone placement in a microphone array speech recognition system", ACOUSTICS, SPEECH AND SIGNAL PROCESSING, 2008. ICASSP 2008. IEEE INTERNATIONAL CONFERENCE ON, IEEE, PISCATAWAY, NJ, USA, 31 March 2008 (2008-03-31), pages 1565 - 1568, XP031250864, ISBN: 978-1-4244-1483-3

Cited by

CN110544486A

Designated contracting state (EPC)

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

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

**EP 2988302 A1 20160224**

DOCDB simple family (application)

**EP 14461562 A 20140821**