

Title (en)

METHOD AND DEVICE FOR GENERATING AUDIO SIGNALS TO BE DELIVERED TO A SOUND REPRODUCTION SYSTEM

Title (de)

VERFAHREN UND VORRICHTUNG ZUR ERZEUGUNG VON TONSIGNALEN ZUR LIEFERUNG AN EIN SCHALLWIEDERGABESYSTEM

Title (fr)

PROCEDE ET DISPOSITIF DE GENERATION DE SIGNAUX AUDIO DESTINES A ETRE FOURNIS A UN SYSTEME DE RESTITUTION SONORE

Publication

EP 2901717 B2 20191225 (FR)

Application

EP 13779301 A 20130925

Priority

- FR 1259126 A 20120927
- FR 2013052256 W 20130925

Abstract (en)

[origin: WO2014049268A1] The invention relates to a method for generating audio signals, from an input audio signal, to be delivered to a sound reproduction system comprising a first set of loud-speakers at a reference height, and a second set of loud-speakers at a higher height than the reference height, that are vertically more directive than the loud-speakers of the first set. Said method comprises: the identification of a position of at least one sound object of the input audio signal; the generation of first audio signals for feeding the first set, by applying, to the input audio signal, at least one delay and/or a gain and a sound spatialisation technique taking into account the identified position and a position of the loud-speakers of the first set; and the generation of second audio signals for feeding the second set, by applying, to the input audio signal, at least one delay and/or a gain and a sound spatialisation technique taking into account the identified position and a position of the loud-speakers of the second set; at least one sound spatialisation technique being a holophonic technique and the delays and/or gains being selected in such a way that the combination of the first signals restituted by the first set and the second signals restituted by the second set verifies a defined sound restitution effect at at least one reference spatial position.

IPC 8 full level

H04R 27/00 (2006.01); **H04S 3/00** (2006.01)

CPC (source: EP)

H04R 27/00 (2013.01); **H04S 3/002** (2013.01); **H04R 1/323** (2013.01); **H04R 2201/401** (2013.01); **H04R 2201/405** (2013.01)

Citation (opposition)

Opponent :

- DE 02004057500 B3
- EP 2056621 A2 20090506 - YAMAHA CORP [JP]
- Photographie (Foto der Seebühne), 2005
- Retrieved from the Internet <URL:http://www.resy.waldsoft.at/page_pool/200404812458/datacenter/Brengener_Festspiele_2005.pdf,2005> & Article de presse daté du 22.07.2011 & KONECNY, G.: "Der Troubadour in Bregenz - Neues Beschallungskonzept für die Seebühne", PROPECT THEATER, October 2005 (2005-10-01), pages 6 - 9
- KLING&FREITAG: " Benutzerhandbuch CA 408P2", 2004
- "Datenblatt JBL 4892", October 1996 (1996-10-01)
- RODIGAST, R.: "A New Method for Sound Production and Reinforcement in Planetarium", IPS 2008 CONFERENCE PROCEEDINGS, 1 January 2008 (2008-01-01), pages 220 - 222, XP055303696
- RODIGAST, R.: "Innovative sound in Dome Theaters", IPS 2006, MELBOURNE, pages 154 - 158
- BRIX, S. ET AL: "Wave Field Synthesis for Virtual Prototyping in VR Systems", ICED '09, August 2009 (2009-08-01), pages 1 - 9
- HÖHNE, G. ET AL: "Virtual Prototyping of Technical Products using a new Audio Visual VR System", PROCEEDINGS OF COBEM 2007, November 2007 (2007-11-01), pages 5 - 9
- WEBER, C. ET AL: "Auralisation of Accoustical Products Properties for Technical Systems in Virtual Environments", 56TH INT. SCIENTIFIC COLLOQUIUM, September 2011 (2011-09-01), pages 12 - 16
- CORTEEL, E. ET AL: "Practical 3 dimensional sound reproduction using Wave Field Synthesis, theory and perceptual validation", PROCEEDINGS OF THE ACOUSTICS 2012, April 2012 (2012-04-01), Nantes, pages 901 - 906, XP055067658
- CORTEEL, E. ET AL: "Equalization in an Extended Area Using Multichannel Inversion and Wave Field Synthesis", JAES, vol. 54, no. 12, December 2006 (2006-12-01), pages 1140 - 1161, XP040507980
- 'Dolby Atmos Next-generation Audio for Cinema', White Paper
- COBOS MAXIMO ET AL: "Influence of the Listening Position in the Perception of Elevated Sources in Wave-Field Synthesis", CONFERENCE: 40TH INTERNATIONAL CONFERENCE: SPATIAL AUDIO: SENSE THE SOUND OF SPACE; OCTOBER 2010, October 2010 (2010-10-01), pages 437 - 443, XP040567110

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

DOCDB simple family (publication)

FR 2996095 A1 20140328; FR 2996095 B1 20151016; EP 2901717 A1 20150805; EP 2901717 B1 20161026; EP 2901717 B2 20191225; WO 2014049268 A1 20140403

DOCDB simple family (application)

FR 1259126 A 20120927; EP 13779301 A 20130925; FR 2013052256 W 20130925