

Title (en)
MULTI-CHANNEL SURROUND SOUND MASTERING AND REPRODUCTION TECHNIQUES THAT PRESERVE SPATIAL HARMONICS IN THREE DIMENSIONS

Title (de)
MEHRKANALIGE RAUMKLANGSMISCHUNG UND WIEDERGABEVERFAHREN MIT EINHALTUNG DER RÄUMLICHEN HARMONISCHEN IN DREI DIMENSIONEN

Title (fr)
PRISE DE SON AMBIANT MULTI-CANAL ET TECHNIQUES DE REPRODUCTION QUI PRESERVENT LES HARMONIQUES SPATIALES EN TROIS DIMENSIONS

Publication
EP 1275272 B1 20121121 (EN)

Application
EP 00970687 A 20001006

Priority
• US 0027851 W 20001006
• US 55237800 A 20000419

Abstract (en)
[origin: WO0182651A1] Techniques of making a recording of or transmitting a sound field from either multiple monaural or directional sound signals that reproduce through multiple discrete loud speakers a sound field with spatial harmonics that substantially exactly match those of the original sound field. Monaural sound sources are positioned during mastering to use contributions of all speaker channels in order to preserve the spatial harmonics. If a particular arrangement of speakers is different than what is assumed during mastering, the speaker signals are rematrixed at the home, theater or other sound reproduction location so that the spatial harmonics of the sound field reproduced by the different speaker arrangement match those of the original sound field. An alternative includes recording or transmitting directional microphone signals, or their spatial harmonic components, and then matrixing these signals at the sound reproduction location in a manner that takes into account the specific speaker arrangement. The techniques are described for both a two dimensional sound field and the more general three dimensional case, the latter based upon using spherical harmonics.

IPC 8 full level
H04R 3/00 (2006.01); **H04S 3/02** (2006.01)

CPC (source: EP)
H04S 3/02 (2013.01); **H04S 2400/15** (2013.01); **H04S 2420/11** (2013.01)

Citation (examination)
US 5757927 A 19980526 - GERZON MICHAEL ANTHONY [GB], et al

Cited by
US8908873B2; US9015051B2; US8290167B2; US9460726B2; US9767813B2; US10037762B2; US10134405B2; US10522159B2; US10629211B2; US11217258B2; US11948583B2

Designated contracting state (EPC)
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)
WO 0182651 A1 20011101; AU 8003000 A 20011107; CA 2406926 A1 20011101; CN 1452851 A 20031029; EP 1275272 A1 20030115; EP 1275272 B1 20121121; JP 2003531555 A 20031021; JP 4861593 B2 20120125

DOCDB simple family (application)
US 0027851 W 20001006; AU 8003000 A 20001006; CA 2406926 A 20001006; CN 00819561 A 20001006; EP 00970687 A 20001006; JP 2001578151 A 20001006