

## Title (en)

Audio signal, method and apparatus for encoding or transmitting the same and method and apparatus for processing the same

## Title (de)

Audiosignal, Verfahren und Vorrichtung zu dessen Kodierung oder Übertragung sowie Verfahren und Vorrichtung zu dessen Verarbeitung

## Title (fr)

Signal audio, procédé et appareil pour coder ou transmettre celui-ci et procédé et appareil pour le traiter

## Publication

**EP 2094032 A1 20090826 (EN)**

## Application

**EP 08101732 A 20080219**

## Priority

EP 08101732 A 20080219

## Abstract (en)

Commonly used audio file formats relate directly to the audio channels, i.e. the audio information is stored like it is fed to the loudspeaker. However, for obtaining a general description of audio information, a paradigm shift is necessary. Instead of storing the loudspeaker channels, a new audio format may use the description of the spatial sound field. A method for encoding or transmitting an audio signal comprises the steps of providing one or more audio source signals (X src ), determining for each of said audio source signals a specific position to which it relates, generating data sets containing the determined positions (r src ) of the audio sources, and encoding or transmitting (62) the data sets together with said audio source signals. Advantageously, this allows conversion into Higher Order Ambisonics (HOA) format and subsequent re-conversion into conventional audio data that can be adapted to a given loudspeaker configuration.

## IPC 8 full level

**H04S 3/02** (2006.01)

## CPC (source: EP)

**G10L 19/008** (2013.01); **H04S 3/002** (2013.01); **H04S 2420/03** (2013.01); **H04S 2420/11** (2013.01)

## Citation (search report)

- [XY] US 2005141728 A1 20050630 - MOORER JAMES A [US]
- [XA] FR 2847376 A1 20040521 - FRANCE TELECOM [FR]
- [X] US 2007269063 A1 20071122 - GOODWIN MICHAEL [US], et al
- [Y] EP 1515308 A1 20050316 - NOKIA CORP [FI]
- [XA] WO 2007136187 A1 20071129 - KOREA ELECTRONICS TELECOMM [KR], et al
- [XA] DE 102005008366 A1 20060824 - FRAUNHOFER GES FORSCHUNG [DE]
- [X] EP 1416769 A1 20040506 - KOREA ELECTRONICS TELECOMM [KR]
- [XA] US 2005117753 A1 20050602 - MIURA MASAYOSHI [JP], et al

## Cited by

US10674299B2; US2017034639A1; CN112954510A; CN104429102A; CN106663433A; CN107424618A; CN110827840A; AU2014265108A1; AU2014265108B2; AU2016204408B2; AU2018201133B2; AU2020201419B2; AU2021282442B2; WO2014014891A1; JP2015527821A; JP2017142520A; JP2017199013A; GB2554446A; KR20160145646A; CN106664500A; AU2015244473B2; AU2018208751B2; CN110610712A; KR20210064421A; WO2011117399A1; CN102823277A; AU2011231565B2; JP2016520864A; CN107293304A; KR20210107165A; JP2021184611A; US9007871B2; US9674625B2; US10185542B2; US10241752B2; US10679605B2; US10705794B2; US10892996B2; US11048473B2; US11080012B2; US11468282B2; US11499255B2; US9020163B2; US9798393B2; US10049668B2; US10102359B2; US10332518B2; US10354652B2; US10403283B1; US10417405B2; US10474753B2; US10496753B2; US10720160B2; US10741181B2; US10984798B2; US11475898B2; US8452037B2; US9386362B2; US9646614B2; US9711141B2; US10063951B2; US10403278B2; US10706373B2; US10791216B2; US11010561B2; US11120372B2; US11301477B2; US9721566B2; US9865280B2; US9972304B2; US10023516B2; US10074360B2; US10284951B2; US10311871B2; US10453443B2; US10553215B2; US10930282B2; US11281993B2; US11360641B2; US11488406B2; US11561144B1; US9525943B2; US10067938B2; US10127911B2; US10192552B2; US10241644B2; US10311144B2; US10362403B2; US10438595B2; US10568032B2; US10795541B2; US11025565B2; US11170166B2; US11289073B2; US11475884B2; US8644519B2; US8858271B2; US8989428B2; US10083690B2; US10318871B2; US10490187B2; US10659851B2; US10657966B2; US10706841B2; US10733993B2; US11314370B2; US11423886B2; US11928604B2; US8560309B2; US9697820B2; US9953088B2; US9961467B2; US10057736B2; US10134385B2; US10509862B2; US10552013B2; US10789041B2; US10789945B2; US10810274B2; US10873798B1; US11069336B2; US11204787B2; US11350253B2; US11556230B2; US11656884B2; US9288603B2; US9646609B2; US9788133B2; US9842105B2; US9959870B2; US9971774B2; US10354011B2; US10636424B2; US10757491B1; US10770087B2; US10789959B2; US11140099B2; US11217251B2; US11227589B2; US11307752B2; US11743623B2; US10079014B2; US10176167B2; US10249300B2; US10417266B2; US10446141B2; US10592095B2; US10684703B2; US10769385B2; US11009970B2; US11857063B2; US9620105B2; US9881628B2; US10249312B2; US10303715B2; US10593346B2; US10671428B2; US11217255B2; US11334032B2; US10755051B2; US10909171B2; US11386266B2; US11500672B2; US9858925B2; US10063977B2; US10101822B2; US10186254B2; US10255907B2; US10475446B2; US10691473B2; US10791176B2; US10873822B2; US11245998B2; US11405466B2; US11496600B2; US11526368B2; US11785407B2; US8942410B2; US9357299B2; US9473870B2; US9820033B2; US10049663B2; US10289433B2; US10297253B2; US10395654B2; US10402151B2; US10580409B2; US10592604B2; US10733375B2; US10748546B2; US10755703B2; US10762293B2; US10771742B1; US11010127B2; US11010550B2; US11069347B2; US11152002B2; US11217255B2; US11334032B2; US11462215B2; US11740591B2; US9668024B2; US9715875B2; US9760559B2; US9900698B2; US9934775B2; US9961475B2; US9966068B2; US10089072B2; US10170123B2; US10199051B2; US10496705B1; US10504518B1; US10567477B2; US10657961B2; US10699717B2; US10714117B2; US10714095B2; US10904611B2; US10942702B2; US10944859B2; US10978090B2; US11133008B2; US11257504B2; US9633660B2; US9668121B2; US9626955B2; US9818400B2; US9858948B2; US9865248B2; US9986419B2; US10049675B2; US10169329B2; US10230666B2; US10283110B2; US10381016B2; US10390213B2; US10410637B2; US10417344B2; US10431204B2; US10607141B2; US10607140B2; US10643611B2; US10692504B2; US10726832B2; US10818288B2; US10847142B2; US10942703B2; US10984327B2; US10984326B2; US11231904B2; US11237797B2; US11269678B2; US11348582B2; US11360739B2; US11410053B2; US8811648B2; US8903108B2; US9204236B2; US9549275B2; US9633674B2; US9838826B2; US9842101B2; US9922656B2; US9922642B2; US10083688B2; US10244343B2; US10269345B2; US10445429B2; US10482874B2; US10521466B2; US10609506B2; US10839159B2; US11023513B2; US11057731B2; US11127397B2; US11145294B2; US11495218B2; US11641562B2; US9734193B2; US9883312B2; US9886953B2; US9980074B2; US10078631B2; US10108612B2; US10127220B2; US10276170B2; US10446143B2; US10499176B2; US10529332B2; US10553209B2; US10741185B2; US10909331B2; US10928918B2; US11087759B2; US11146903B2; US11962990B2; US9100768B2; US9460726B2; US9620104B2; US9767813B2; US9785630B2; US9886432B2; US9899019B2; US9966060B2; US9966065B2; US10037762B2; US10134405B2; US10264382B2; US10356243B2; US10366158B2; US10497365B2; US10522159B2; US10623878B2; US10629211B2; US10657328B2; US10681212B2; US10747498B2; US10878809B2; US10984780B2; US10999688B2; US11217258B2; US11284210B2;

US11307661B2; US11348573B2; US11423908B2; US11587559B2; US11638059B2; US11758344B2; US11895477B2; US11907426B2;  
US11948583B2

Designated contracting state (EPC)  
DE FR GB

Designated extension state (EPC)  
AL BA MK RS

DOCDB simple family (publication)  
**EP 2094032 A1 20090826**

DOCDB simple family (application)  
**EP 08101732 A 20080219**