



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
14.12.2011 Bulletin 2011/50

(51) Int Cl.:
H04N 7/00 (2011.01) H04H 20/89 (2008.01)
H04S 7/00 (2006.01)

(43) Date of publication A2:
28.09.2011 Bulletin 2011/39

(21) Application number: **11159156.6**

(22) Date of filing: **16.05.2007**

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

(30) Priority: **19.05.2006 KR 20060045184**

(62) Document number(s) of the earlier application(s) in accordance with Art. 76 EPC:
07746543.3 / 2 022 263

(71) Applicant: **Electronics and Telecommunications Research Institute**
Daejeon 305-350 (KR)

(72) Inventors:
• **Lee, Yong-Ju**
305-345, Daejeon (KR)

- **Lee, Tae-Jin**
305-752, Daejeon (KR)
- **Yoo, Jae-Hyoun**
305-350, Daejeon (KR)
- **Kang, Kyeong-Ok**
305-727, Daejeon (KR)
- **Hong, Jin-Woo**
305-333, Daejeon (KR)
- **Jang, In-Seon**
305-345, Daejeon (KR)
- **Seo, Jeong-Il**
305-728, Daejeon (KR)
- **Jang, Dae-Young**
305-768, Daejeon (KR)

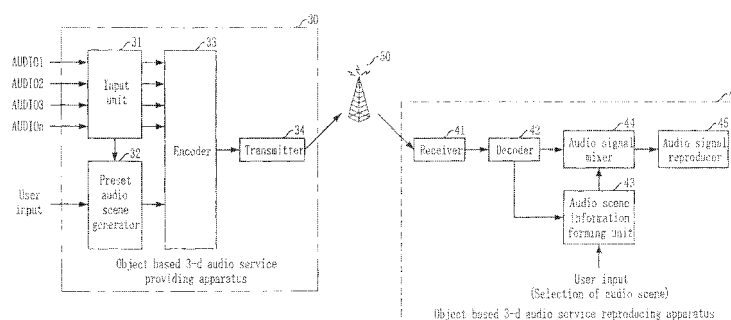
(74) Representative: **Betten & Resch**
Patentanwälte
Theatinerstrasse 8
80333 München (DE)

(54) **Object-based 3-dimensional audio service system using preset audio scenes**

(57) Provided are an object-based three dimensional (3-D) audio service system using preset audio scenes and a method thereof. The system and the method are suggested for enabling a user to easily and conveniently watch and listen an object based 3-D audio service by eliminating inconvenience that requires a user to control each of object audio signals of sound sources. The system includes: audio input means for inputting an audio

signal; preset audio scene generating means for extracting object audio signals from the audio signal inputted through the audio input means and generating more than one of 3-D audio scene information by arranging the extracted object audio signals in a 3-D space and editing features of each object; and encoding means for encoding and multiplexing the audio signal and the 3-D audio scene information for each object audio signal.

FIG. 2





EUROPEAN SEARCH REPORT

Application Number
EP 11 15 9156

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	KALVA H ET AL: "DELIVERING OBJECT-BASED AUDIO-VISUAL SERVICES", IEEE TRANSACTIONS ON CONSUMER ELECTRONICS, IEEE SERVICE CENTER, NEW YORK, NY, US LNKD- DOI:10.1109/30.809189, vol. 45, no. 4, 1 November 1999 (1999-11-01), pages 1108-1111, XP000928095, ISSN: 0098-3063 * the whole document *	1-12	INV. H04N7/00 H04H20/89 H04S7/00
X	AVARO O ET AL: "The MPEG-4 systems and description languages: A way ahead in audio visual information representation", SIGNAL PROCESSING. IMAGE COMMUNICATION, ELSEVIER SCIENCE PUBLISHERS, AMSTERDAM, NL LNKD- DOI:10.1016/S0923-5965(97)00027-1, vol. 9, no. 4, 1 May 1997 (1997-05-01), pages 385-431, XP004075337, ISSN: 0923-5965 * page 385 - page 395 *	1-12	
A	TAEJIN LEE, GI YOON PARK, INSEON JANG, KYEONGOK KANG: "An Object-based 3D Audio Broadcasting System for Interactive Service.", CONVENTION PAPER 6384 118TH CONVENTION AUDIO ENGINEERING SOCIETY, 31 May 2005 (2005-05-31), XP002577516, Retrieved from the Internet: URL:http://www.aes.org/tmpFiles/elib/20100 413/13100.pdf [retrieved on 2010-04-12] * the whole document *	1-12	TECHNICAL FIELDS SEARCHED (IPC) H04S H04H
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 2 November 2011	Examiner Righetti, Marco
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

1
EPO FORM 1503 03/82 (P04C01)