Abstract: Audio signals (201) are received. The audio signals include left and right surround channels (206). The audio signals are played back using far-field loudspeakers (101-108, 401-406) distributed around a space (111, 409) having a plurality of listener positions (112, 410). The left and right surround channels are played back by a pair of far-field loudspeakers (103, 106, 403, 405) arranged at opposite sides of the space having the plurality of listener positions. An audio component (208) coinciding with or approximating audio content common to the left and right surround channels is obtained. The audio component is played back using at least a pair of near-field transducers (109, 110, 407, 408) arranged at one of the listener positions. Associated systems (100, 400), methods (900) and computer program products are provided. Systems (300), methods (900) and computer program products providing a bitstream (303) comprising the audio signals and the audio component are also provided, as well as a computer-readable medium with data (700) representing such audio content.
before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))
INTERNATIONAL SEARCH REPORT

International application No
PCT/US2016/032211

A. CLASSIFICATION OF SUBJECT MATTER

INV. H04S3/00 H04R27/00
ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
H04S H04R

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic database consulted during the international search (name of data base and, where practicable, search terms used)
EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
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<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
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Further documents are listed in the continuation of Box C.

See patent family annex.

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"Z" document member of the same patent family

Date of the actual completion of the international search 28 October 2016

Date of mailing of the international search report 22/11/2016

Name and mailing address of the ISA/
European Patent Office, P.B. 5818 Patentlaan 2
NL-2280 HV Rijswijk
Tel. (+31-70) 340-2040,
Fax: (+31-70) 340-3016

Authorized officer
Moscu, Viorel
**INTERNATIONAL SEARCH REPORT**

**Box No. II**  
**Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)**

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
   because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
   because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
   because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

**Box No. III**  
**Observations where unity of invention is lacking (Continuation of item 3 of first sheet)**

This International Searching Authority found multiple inventions in this international application, as follows:

- see additional sheet

1. ☑ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

**Remark on Protest**

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.

- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.

- ☑ No protest accompanied the payment of additional search fees.
This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-24, 28, 30

Audio playback method / system playing back the left and right surround channels using far-field loudspeakers. The audio content common to the left and right surround channels is further played back using near-field transducers.
Object: To provide each of the listeners distributed around a listening space with his own audio content.

2. claims: 25-27, 29, 31

Audio method / system extracting the common audio content of the left and right surround channels and providing a bit stream comprising the left and the right surround channels and said common audio component.
Object: To provide a new encoding method / system.
<table>
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<th>Patent family member(s)</th>
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<td>US 2012237037 AI 20-09-2012</td>
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