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[Continued on next page]

(54) Title: SYSTEM AND METHOD FOR DYNAMIC RECOVERY OF AUDIO DATA AND COMPRESSED AUDIO ENHANCEMENT

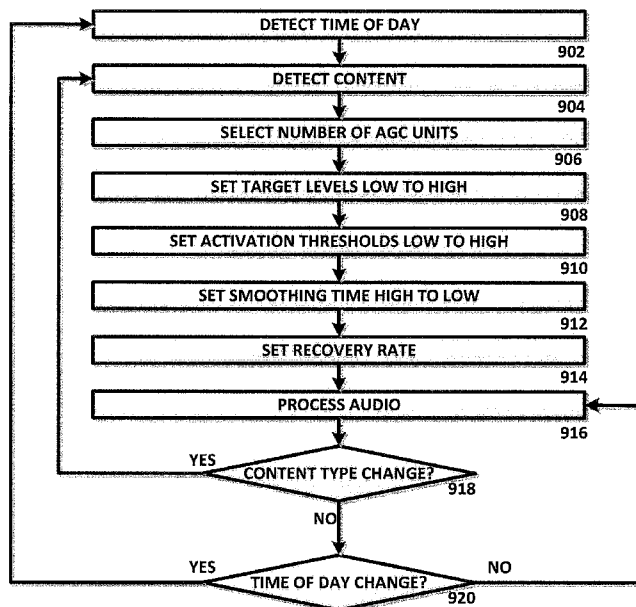


FIG. 9

900



(57) Abstract: A system for processing digitally-encoded audio data comprising a compressed audio source device providing a sequence of frames of compressed digital audio data. A compressed audio enhancement system configured to receive the sequence of frames of compressed digital audio data and to generate enhanced audio data by adding masked digital audio data to the sequence of frames of compressed digital audio data, where the masked digital audio data has an energy level sufficient to keep a kinocilia of a listener active. One or more speakers configured to receive the enhanced audio data and to generate sound waves using the enhanced audio data.



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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
INV. G10L19/02 G10L19/028 G10L21/02
ADD. G10L19/025

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)
G10L

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

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

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2010/083879 A1 (WIDEX AS [DK]; NIELSEN JAKOB [DK]; NORGAARD PETER MAGNUS [DK]) 29 July 2010 (2010-07-29)	1,10
Y	figure 1 page 6, line 29 - page 8, line 2 -----	2-9, 11-19
X	US 2011/085677 A1 (WALSH MARTIN [US] ET AL) 14 April 2011 (2011-04-14) paragraph [0076] - paragraph [0083] figures 4, 5 -----	1,10
Y	WO 2010/003557 A1 (FRAUNHOFER GES FORSCHUNG [DE]; NAGEL FREDERIK [DE]; DISCH SASCHA [DE];) 14 January 2010 (2010-01-14) page 10, line 30 - page 11, line 8 figures 3b-3d page 16, line 34 - page 19, line 9 ----- -/-	2-9, 11-19



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents :

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

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"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

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"&" document member of the same patent family

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2016/021976

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.:

1-19

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.

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2016/021976

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 2 239 732 A1 (FRAUNHOFER GES FORSCHUNG [DE]) 13 October 2010 (2010-10-13) figure 6 paragraph [0039] -----	1-19

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2016/021976

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International application No

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FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-19

Gain adjustment depending transient.

2. claims: 20-39

Audio processing with improved masking of audio artifacts.
