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(72) Inventor; and

(71) Applicant : AL-SHALASH, Taha Kais Taha [EG/EG];
Flat 64, Floor 6, Building 23, Al-Qubba street Al-Zaiton
District, Postal Code: 0124, Cairo (EG).

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— of inventorship (Rule 4.17(iv))

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(54) Title: TALKER LANGUAGE, GENDER AND AGE SPECIFIC HEARING DEVICE

(57) Abstract: A method of operating an audio processing device to improve a user's perception of the speech signal. The method comprising: converting by the audio processing device the input speech signal into a number of frequency bands corresponding to a perception scale, applying "band specific frequency lowering scheme" mainly on the least important frequency bands according to the specific language phonemes formants number, the talker fundamental frequency as it differs among male, female and children, the importance of each of these phonemes in speech recognition and frequency of occurrence of each phoneme in conversation.



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INTERNATIONAL SEARCH REPORT

International application No.

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A. CLASSIFICATION OF SUBJECT MATTER

IPC - H04R25/02; H04R25/04; G10L19/04 (2017.01)

CPC - H04R25/02; H04R25/353; H04R25/75; G10L19/265; G10L21/0232

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)

See Search History document

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

See Search History document

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

See Search History document

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 2002135364 A (NEC SAITAMA LDT.) May 10, 2002; figures 1, 2, 4, and 6; paragraphs [0001, 0019, 0022-0024, 0027-0029, 0049-0051].	1-12
Y	US 5,459,813 A (KLAYMAN, A) October 17, 1995; column 4, lines 7-22; column 6, lines 6-20.	1-12
Y	US 8,150,694 B2 (KENNEWICK, R et al.) April 3, 2012; figure 1; column 8, lines 1-63.	1-12
A	US 2004/02464721 A1 (ALLEGRO, S et al.) December 30, 2004; entire document.	1-12

☐ Further documents are listed in the continuation of Box C.☐ See patent family annex.

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Mail Stop PCT, Attn: ISA/US, Commissioner for Patents
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Facsimile No. 571-273-8300

Authorized officer

Shane Thomas

PCT Helpdesk: 571-272-4300
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