

Title (en)
Method of processing an acoustical signal and a hearing instrument

Title (de)
Verfahren zur Verarbeitung eines akustischen Signals und ein Hörgerät

Title (fr)
Procédé de traitement d'un signal acoustique et un appareil auditif

Publication
EP 1469703 A3 20050622 (EN)

Application
EP 04405272 A 20040430

Priority
EP 04405272 A 20040430

Abstract (en)
[origin: EP1469703A2] A method of processing an acoustic input signal into an output signal in a hearing instrument includes converting the acoustic input signal into a converted input signal, and applying a gain to the converted input signal to obtain the output signal. According to the invention, the gain is calculated using a room impulse attenuation value being a measure of a maximum negative slope of the a converted input signal power on a logarithmic scale. The calculation of the gain may include evaluating a signal power development value being a measure of the actual converted input signal power attenuation or signal power increase, evaluating a signal-to-reverberation-noise ratio from the signal power development value and the room impulse attenuation value, and calculating, based on a gain rule, said gain from said signal-to-reverberation-noise ratio. <IMAGE>

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H04R 25/505 (2013.01); **H04R 2225/43** (2013.01)

Citation (search report)

- [A] WO 2004008801 A1 20040122 - WIDEX AS [DK], et al
- [A] LARSEN E ET AL INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS: "Acoustic scene analysis using estimated impulse responses", CONFERENCE RECORD OF THE 37TH. ASILOMAR CONFERENCE ON SIGNALS, SYSTEMS, & COMPUTERS. PACIFIC GROOVE, CA, NOV. 9 - 12, 2003, ASILOMAR CONFERENCE ON SIGNALS, SYSTEMS AND COMPUTERS, NEW YORK, NY : IEEE, US, vol. VOL. 1 OF 2. CONF. 37, 9 November 2003 (2003-11-09), pages 725 - 729, XP010701896, ISBN: 0-7803-8104-1
- [A] BEES D ET AL: "Reverberant speech enhancement using cepstral processing", SPEECH PROCESSING 2, VLSI, UNDERWATER SIGNAL PROCESSING. TORONTO, MAY 14 - 17, 1991, INTERNATIONAL CONFERENCE ON ACOUSTICS, SPEECH & SIGNAL PROCESSING. ICASSP, NEW YORK, IEEE, US, vol. VOL. 2 CONF. 16, 14 April 1991 (1991-04-14), pages 977 - 980, XP010043137, ISBN: 0-7803-0003-3
- [A] YEGNANARAYANA B ET AL: "Enhancement of reverberant speech using LP residual", 12 May 1998, ACOUSTICS, SPEECH AND SIGNAL PROCESSING, 1998. PROCEEDINGS OF THE 1998 IEEE INTERNATIONAL CONFERENCE ON SEATTLE, WA, USA 12-15 MAY 1998, NEW YORK, NY, USA, IEEE, US, PAGE(S) 405-408, ISBN: 0-7803-4428-6, XP010279126

Cited by
EP2573768A3; EP1772713A4; EP1753264A1; GB2551499A; GB2551499B; CN113132882A; JP2019033477A; US9093077B2; WO2012010218A1; US9167359B2; EP3337190A1; US10499167B2

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