Title (en)

Method for the discrimination of speech in presence of ambient noise and low bit-rate vocoder to implement the method.

Title (de)

Verfahren zur Sprachunterscheidung bei Geräuschenwesenheit und Vocoder mit einer niedrigen Bitrate zur Ausführung dieses Verfahrens.

Title (fr)

Procédé de discrimination de la parole en présence de bruits ambiants et vocodeur à faible débit pour la mise en oeuvre du procédé.

Publication

EP 0596785 A1 19940511 (FR)

Application

EP 93402670 A 19931029

Priority

FR 9213397 A 19921106

Abstract (en)

The method of discrimination of speech in the presence of ambient noise consists, for analysing a signal Sn consisting of the sum of a defined number K of periodic excitations and of an aperiodic excitation, in calculating (1) the overall autocorrelation rm of the signal Sn, in calculating (2) the partial sums tm of the short-term aperiodic autocorrelation, in calculating (1) the overall autocorrelation rm of the signal Sn, in calculating (2) the partial sums tm of the short-term autocorrelation sm correlated with the overall autocorrelation rm, in initialising (3) a counter k and, as long as the counter k has not reached the maximum value K corresponding to the maximum number of periodic excitations (6), for each incrementation (4) of the counter k, after having corrected (7) the calculation of the partial sums tm, in calculating (5) the values of the pitch (Mk) of the gain beta k, and of the slope of the gain alpha k of each periodic excitation, and in determining the level of the aperiodic excitation beta o as a function of the overall autocorrelation rm at the start of analysis and of the overall autocorrelation rm at the end of analysis. Application: low bit-rate vocoders. <IMAGE>

Abstract (fr)

Le procédé de discrimination de la parole en présence de bruits ambiants consiste pour analyser un signal Sn composé de la somme d'un nombre K déterminé d'excitations périodiques et d'une excitation apériodique, à calculer (1) l'autocorrélation globale rm du signal Sn, à calculer (2) les sommes partielles tm de l'autocorrélation à court terme apériodique, à calculer (1) l'autocorrélation globale rm du signal Sn, à calculer (2) les sommes partielles tm de l'autocorrélation à court terme sm corrélée avec l'autocorrélation globale rm, à initialiser (3) un compteur k et tant que le compteur k n'atteint pas la valeur maximale K correspondant au nombre maximal d'excitations périodiques (6), pour chaque incrémentation (4) du compteur k, aprés avoir corrigé (7) le calcul des sommes partielles tm, à calculer (5) les valeurs du pitch Mk, du gain βk et de la pente du gain αk de chaque excitation périodique, et à déterminer le niveau de l'excitation apériodique βO en fonction de l'autocorrélation globale rm en début d'analyse et de l'autocorrélation globale rm en fin d'analyse. Application : vocodeurs faible débit. <IMAGE>

IPC 1-7

G10L 9/14; G10L 9/08

IPC 8 full level

G10L 19/09 (2013.01); G10L 25/06 (2013.01)

CPC (source: EP)

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Citation (search report)

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