Title (en)

Method and apparatus for low bit rate transmission of a speech signal using CELP coding

Title (de)

Verfahren und Einrichtung zur Übertragung mit niedriger Bitrate eines Sprachsignals mittels CELP-Codierung

Title (fr)

Procédé de transmission, à bas débit, par codage CELP d'un signal de parole et système correspondant

Publication

EP 0481895 B1 19971210 (FR)

Application

EP 91402774 A 19911017

Priority

FR 9012980 A 19901019

Abstract (en)

[origin: EP0481895A2] The invention relates to a method for low bit rate transmission of a digital speech signal. <??>The coding is effected by linear prediction driven by codes in order to generate a code signal, a wave form being represented by an initial vector (O) of dimension L, from a filter for synthesis by a reference wave form selected from among a dictionary of reference vectors (v), with a minimum deviation criterion min ¦¦x-H.v¦¦<2>, x representing a target vector by perceptual weighting of the initial vector (O). A dictionary (Y) factorised as a product of base vectors yi of n-ary form, corrected by a scale factor gamma i of distribution of the excitation energy, and of a dictionary G(y) of gains gk, are established in order to represent the dictionary of the reference vectors (v), vk,i = gk. gamma i.yi. The criterion is established by calculation of C(gk, gamma i.yi) = 2 gk<x¦H. gamma i.yi>-gk<2> ¦¦H. gamma i.yi¦¦<2> formed by the scalar products and perceptual energies. To the initial vector (O) is attributed the optimal reference vector vk<*>, i<*> = gk<*>.i<*>.yi<*> represented only by the index values k<*>,i<*>. <??>Application to coding and transmission of speech at a low bit rate by ternary or n-ary vectors. <IMAGE>

IPC 1-7

G10L 9/14

IPC 8 full level

G10L 19/12 (2013.01); **H04B 14/04** (2006.01)

CPC (source: EP US)

G10L 19/083 (2013.01 - EP US); **G10L 19/12** (2013.01 - EP US); G10L 2019/0005 (2013.01 - EP US); G10L 2019/0007 (2013.01 - EP US)

Citation (examination)

Academic Publishers, Dordrecht, NL; R.A. SALAMI: "Binary pulse excitation: a novel approach to low complexity CELP coding"

Designated contracting state (EPC)

DE GB

DOCDB simple family (publication)

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DOCDB simple family (application)

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