Title (en)

System for predictive encoding/decoding of a digital speech signal by an adaptive transform with embedded codes

Title (de)

System zur prädiktiven Kodierung/Dekodierung eines digitalen Sprachsignals mittels einer adaptiven Transformation mit eingebetteten Kodes

Title (fr)

Systeme de codage-décodage prédictif d'un signal numérique de parole par transformée adaptative à codes imbriqués

Publication

EP 0608174 B1 19980812 (FR)

Application

EP 94400109 A 19940118

Priority

FR 9300601 A 19930121

Abstract (en)

[origin: EP0608174A1] The invention relates to a system for the predictive encoding of a digital speech signal with embedded codes. The encoded digital signal (Sn) is formed by an encoded speech signal and, if appropriate, by auxiliary data. A perceptual weighting filter (11) is formed by a filter for short-term prediction of the speech signal to be encoded so as to produce a frequency distribution of the quantisation noise. A circuit (12) makes it possible to subtract from the perceptual signal @, the contribution from the past excitation signal @ so as to deliver an updated perceptual signal Pn. A long-term prediction circuit (13) is formed, as a closed loop, from a dictionary updated with the past excitation @ modeled for the lowest throughput and enables an optimal wave form and an associated estimated gain @ to be delivered. An orthonormal transform module (MT) includes an adaptive transform module (14) and a module (16) for progressive modelling by orthogonal vectors, this making it possible to deliver indices representing the encoded speech signal. A circuit (19) allows the insertion of auxiliary data through bit stealing from the encoded speech signal. Application to any transmission system and to the storage of speech signals. <IMAGE>

IPC 1-7

G10L 9/14

IPC 8 full level

G10L 19/02 (2013.01)

CPC (source: EP US)

G10L 19/0212 (2013.01 - EP US); G10L 2019/0002 (2013.01 - EP US); G10L 2019/0003 (2013.01 - EP US); G10L 2019/0005 (2013.01 - EP US); G10L 2019/0011 (2013.01 - EP US)

Cited by

US6107430A; EP0792502A4; US5809456A; EP0751492A3

Designated contracting state (EPC)

DE GB

DOCDB simple family (publication)

EP 0608174 A1 19940727; **EP 0608174 B1 19980812**; DE 69412294 D1 19980917; DE 69412294 T2 19990415; FR 2700632 A1 19940722; FR 2700632 B1 19950324; US 5583963 A 19961210

DOCDB simple family (application)

EP 94400109 A 19940118; DE 69412294 T 19940118; FR 9300601 A 19930121; US 18418694 A 19940121