

Title (en)

Method and apparatus for coding digital signals.

Title (de)

Verfahren und Einrichtung zur Codierung von digitalen Signalen.

Title (fr)

Procédé et dispositif pour le codage de signaux digitaux.

Publication

EP 0149724 A1 19850731 (EN)

Appication

EP 84112041 A 19841008

Priority

CA 442281 A 19831130

Abstract (en)

In a method and apparatus for coding of digital signals, especially so-called "waveform" coding of voice frequency signals to reduce bit rates for reduced transmission or storage requirements, in which, for each block, an excitation signal is derived which, when applied to be a synthesis filter having suitable LPC coefficients, will generate an approximation to the input signal, low signal delay is achieved by deriving such excitation signal using the LPC coefficients corresponding to the last sample period of the corresponding block. Thus the excitation signal calculations in the encoder need only be delayed by the duration of the block. The LPC coefficients can be derived on a continuous or sample-by-sample basis using an adaptive lattice. Simplified computation of the excitation signal, which comprises a set of pulses fewer in number than the number of samples in the original block, may be achieved by cross-correlating the impulse response of the modified synthesis filter with the output of the filter and using the result, together with the covariance of the impulse response, to derive the parameters of the excitation pulses. Further computation simplifications may be achieved by using an auto-correlation as the covariance signal.

IPC 1-7

G10L 9/14

IPC 8 full level

H03M 7/30 (2006.01); **G10L 19/04** (2013.01); **G10L 19/10** (2006.01); **H04B 14/04** (2006.01)

CPC (source: EP)

G10L 19/06 (2013.01); **G10L 19/10** (2013.01)

Citation (search report)

- [A] GB 2110906 A 19830622 - WESTERN ELECTRIC CO
- [A] IEEE GLOBAL TELECOMMUNICATIONS CONFERENCE, GLOBECOM '83, San Diego, California, 28th November - 1st December 1983, vol. 2, pages 794-798, IEEE, New York, US; T. ARASEKI et al.: "Multi-pulse excited speech coder based on maximum crosscorrelation search algorithm"

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US6807527B1; AU620384B2; US5701392A; GB2297671A; GB2297671B; US5754976A; US7409744B2; WO9501673A1

Designated contracting state (EPC)

AT DE FR GB IT NL SE

DOCDB simple family (publication)

EP 0149724 A1 19850731; **EP 0149724 B1 19890503**; AT E42853 T1 19890515; CA 1236922 A 19880517; DE 3478065 D1 19890608; JP S60185432 A 19850920

DOCDB simple family (application)

EP 84112041 A 19841008; AT 84112041 T 19841008; CA 442281 A 19831130; DE 3478065 T 19841008; JP 25065584 A 19841129