

Title (en)
EFFICIENT CELP VOCODER AND METHOD

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EP 0516439 A3 19930616 (EN)

Application
EP 92304875 A 19920528

Priority

- US 70860991 A 19910531
- US 70894791 A 19910531
- US 71440991 A 19910612
- US 72257291 A 19910627

Abstract (en)
[origin: EP0516439A2] The computational effort and time for CELP coding of speech is reduced by rearranging the recursive loop used to search vectors of an adaptive codebook so that an impulse function of a short term perceptually weighted filter is first convolved with perceptually weighted target speech and the result cross-correlated with each codebook vector to produce an error function for identifying the optimum adaptive codebook vector. In addition, autocorrelation is initially performed for only a small number of autocorrelation coefficients in each codebook vector and the values found are used to scan through all the vectors to find those giving a better match to input speech. Autocorrelation using all the vector values is then performed on this subset of vectors to identify the best vector for representing the frame of speech. An end correction procedure is used for vectors shorter than the speech frame length to avoid copy-up errors common in the prior art. An improved means and method for obtaining correlation coefficients for the stochastic codebook vectors is also described.. <IMAGE> <IMAGE>

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IPC 8 full level
G10L 19/00 (2006.01); **G10L 19/04** (2006.01); **G10L 19/08** (2006.01); **G10L 19/12** (2006.01)

CPC (source: EP)
G10L 19/12 (2013.01); **G10L 25/06** (2013.01); **G10L 25/18** (2013.01); **G10L 2019/0014** (2013.01)

Citation (search report)

- [A] US 4969192 A 19901106 - CHEN JUIN-HWEY [US], et al
- [A] GB 2173679 A 19861015 - BRITISH TELECOMM
- [A] EP 0296763 A1 19881228 - AMERICAN TELEPHONE & TELEGRAPH [US]

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