

Title (en)
PROCESSING OF ACOUSTIC WAVEFORMS.

Title (de)
BEHANDLUNG AKUSTISCHER WELLENFORMEN.

Title (fr)
TRAITEMENT DE FORMES D'ONDES ACOUSTIQUES.

Publication
EP 0215915 A4 19871125 (EN)

Application
EP 86902188 A 19860314

Priority
US 71286685 A 19850318

Abstract (en)
[origin: WO8605617A1] A sinusoidal model for acoustic waveforms is applied to develop a new analysis/synthesis technique which characterizes a waveform by the amplitudes, frequencies, and phases of component sine waves. These parameters are estimated from a short-time Fourier transform. Rapid changes in the highly-resolved spectral components are tracked using the concept of "birth" and "death" of the underlying sine waves. The component values are interpolated from one frame to the next to yield a representation that is applied to a sine wave generator. The resulting synthetic waveform preserves the general waveform shape and is perceptually indistinguishable from the original. Furthermore, in the presence of noise the perceptual characteristics of the waveform as well as the noise are maintained. The method and devices disclosed herein are particularly useful in speech coding, time-scale modification, frequency scale modification and pitch modification.

IPC 1-7
G10L 5/00

IPC 8 full level
G10L 13/00 (2006.01); **G10L 19/02** (2013.01)

CPC (source: EP)
G10L 19/02 (2013.01)

Citation (search report)

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- [XP] ICASSP '85, IEEE INTERNATIONAL CONFERENCE ON ACOUSTICS, SPEECH, AND SIGNAL PROCESSING, 26th-29th March 1985, Tampa, Florida, vol. 3, pages 945-948, IEEE, New York, US; R.J. McAULAY et al.: "Mid-rate coding based on a sinusoidal representation of speech"
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- See references of WO 8605617A1

Designated contracting state (EPC)
AT BE CH DE FR GB IT LI LU NL SE

DOCDB simple family (publication)
WO 8605617 A1 19860925; AU 5620886 A 19861013; AU 597573 B2 19900607; CA 1243122 A 19881011; EP 0215915 A1 19870401; EP 0215915 A4 19871125; JP 2759646 B2 19980528; JP S62502572 A 19871001

DOCDB simple family (application)
US 8600543 W 19860314; AU 5620886 A 19860314; CA 504354 A 19860318; EP 86902188 A 19860314; JP 50177986 A 19860314