

Title (en)

METHOD AND APPARATUS FOR SPEECH ANALYSIS, SYNTHESIS AND CODING

Publication

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Application

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Priority

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Abstract (en)

[origin: EP0347338A2] A means of analysing and of synthesising speech is described, using the simulation of the acoustic behaviour of a tube divided into segments with variable cross-section. The variations in cross-section of the various segments of a tube allow the generation of phonemes when an air pressure and delivery source is positioned similar to the human vocal cords. By simulation, these phonemes can be generated in the form of electrical signals delivered to a loud-speaker. The invention bears upon the choice of the lengths of the tube segments and relates this choice to the fineness of the approximation which it is desired to make. For an approximation with three formants (the formants are the resonant frequencies of the tube), the tube is divided into eight segments of successive lengths L/10, L/15, 2L/15, 3L/15, 3L/15, 2L/15, L/15 and L/10; L is the total length of the tube. <IMAGE>

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IPC 8 full level

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CPC (source: EP US)

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Citation (search report)

- [XP] SPEECH COMMUNICATION, vol. 7, no. 3, octobre 1988, pages 257-286, Amsterdam, NL; M. MRAYATI et al.: "Distinctive regions and modes: a new theory of speech production"
- [A] ICASSP'86 (IEEE-IECEJ-ASJ INTERNATIONAL CONFERENCE ON ACOUSTICS, SPEECH, AND SIGNAL PROCESSING), Tokyo, 7-11 avril 1986, vol. 3, pages 2011-2014, IEEE, New York, US; W. FRANK et al.: "Improved vocal tract models for speech synthesis"
- [A] IRE TRANSACTIONS ON CIRCUIT THEORY, vol. CT-3, no. 4, décembre 1956, pages 232-244, New York, US; E.E. DAVID, Jr.: "Signal theory in speech transmission"
- [A] THE JOURNAL OF THE ACOUSTICAL SOCIETY OF AMERICA, vol. 22, no. 6, novembre 1950, pages 740-753, New York, US; H.K. DUNN: "The calculation of vowel resonances, and an electrical vocal tract"
- [A] J.L. FLANAGAN: "Speech Analysis Synthesis and Perception", 1965, pages 166-171, Springer-Verlag, Berlin, DE

Cited by

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