

Title (en)

Coding the expressivity in voice synthesis

Title (de)

Kodierung von Ausdruck in Sprachsynthese

Title (fr)

Codage de l'expression dans une voix de synthèse

Publication

**EP 1160766 A1 20011205 (EN)**

Application

**EP 01401391 A 20010529**

Priority

- EP 01401391 A 20010529
- EP 00401560 A 20000602

Abstract (en)

Voice synthesis with improved expressivity is obtained in a voice synthesiser of source-filter type by making use of a library of source sound categories in the source module. Each source sound category corresponds to a particular morphological category and is derived from analysis of real vocal sounds, by inverse filtering so as to subtract the effect of the vocal tract. The library may be parametrical, that is, the stored data corresponds not to the inverse-filtered sounds themselves but to synthesis coefficients for resynthesising the inverse-filtered sounds using any suitable re-synthesis technique, such as the phase vocoder technique. The coefficients are derived by STFT analysis. <IMAGE>

IPC 1-7

**G10L 13/04; G10L 13/06**

IPC 8 full level

**G10L 13/04** (2013.01); **G10L 13/07** (2013.01)

CPC (source: EP)

**G10L 13/04** (2013.01); **G10L 13/07** (2013.01)

Citation (search report)

- [X] US 5528726 A 19960618 - COOK PERRY R [US]
- [A] EP 1005021 A2 20000531 - MATSUSHITA ELECTRIC IND CO LTD [JP]
- [X] MIRANDA E.R.: "a phase vocoder model of the glottis for expressive voice synthesis", 9TH SONY RESEARCH FORUM, SRF TECHNICAL DIGEST, 1999, Tokyo, pages 150 - 152, XP002172507
- [DXY] COOK P.: "Toward the Perfect Audio Morph? Singing Voice Synthesis and Processing", WORKSHOP ON DIGITAL AUDIO EFFECTS 98, PROCEEDINGS OF DAFX98, 19 November 1998 (1998-11-19) - 21 November 1998 (1998-11-21), Barcelona, Spain, pages 223 - 230, XP002151707
- [Y] DATABASE INSPEC [online] INSTITUTE OF ELECTRICAL ENGINEERS, STEVENAGE, GB; YAHAGI T ET AL: "Estimation of glottal waves based on nonminimum-phase models", XP002151708, Database accession no. 6051709 & ELECTRONICS AND COMMUNICATIONS IN JAPAN, PART 3 (FUNDAMENTAL ELECTRONIC SCIENCE), NOV. 1998, SCRIPTA TECHNICA, USA, vol. 81, no. 11, pages 56 - 66, ISSN: 1042-0967
- [Y] VELDHUIS R ET AL: "Time-scale and pitch modifications of speech signals and resynthesis from the discrete short-time Fourier transform", SPEECH COMMUNICATION, NL, ELSEVIER SCIENCE PUBLISHERS, AMSTERDAM, vol. 18, no. 3, 1 May 1996 (1996-05-01), pages 257 - 279, XP004018610, ISSN: 0167-6393

Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

**EP 1160766 A1 20011205; EP 1160766 B1 20050810**

DOCDB simple family (application)

**EP 01401391 A 20010529**