

Title (en)

Sound processing method and device for modifying a sound characteristic, such as an impression of age associated to a voice

Title (de)

Klangverarbeitungsverfahren und -vorrichtung zur Modifikation eines Klangmerkmals, z.B. einer Stimme assoziierten Alterseindrucks

Title (fr)

Procédé et dispositif de traitement de sons afin de modifier une caractéristique du son, comme une impression d'âge associée à une voix

Publication

EP 1286332 A1 20030226 (EN)

Application

EP 01402177 A 20010814

Priority

EP 01402177 A 20010814

Abstract (en)

The invention allows to controllably modify a value of a characteristic, such as an age, associated to a sound contained in sound data (30) such as voice to which is associated a sampling frequency, the sound exhibiting a given value (A) of the characteristic for a first sampling frequency F1. This is achieved by : producing from the sound data at least one sound data portion (UD) containing a sound portion to be reproduced with a modified value of the characteristic, the sound data portion having a first sampling duration R1 at the first sampling frequency F1, establishing (36, 44-48) a second frequency F2 selected as a function of a desired modification in the value of the characteristic, time adjusting (38) the sound data portion (UD) by elaborating a time-adjusted form (UDta) thereof on the basis of a sampling frequency equal to the second frequency F2, the time-adjusting step at least partially tending to cause the sampling duration of the time-adjusted form of sound data portion at the second frequency F2 to match the first sampling duration R1, and playing the time adjusted sound data portion (UDta). Preferably, the time-adjusting step is performed by means of a Pitch-Synchronous Overlap and Add (PSOLA) algorithm (38) or the like. <IMAGE>

IPC 1-7

G10L 21/00; G10L 13/02

IPC 8 full level

G10L 13/033 (2013.01); **G10L 21/04** (2013.01)

CPC (source: EP)

G10L 13/033 (2013.01); **G10L 21/04** (2013.01)

Citation (search report)

- [A] JP H10133852 A 19980522 - TOSHIBA CORP
- [A] EP 0688010 A1 19951220 - CANON KK [JP]
- [X] MOULINES E ET AL: "Non-parametric techniques for pitch-scale and time-scale modification of speech", SPEECH COMMUNICATION, ELSEVIER SCIENCE PUBLISHERS, AMSTERDAM, NL, vol. 16, no. 2, 1 February 1995 (1995-02-01), pages 175 - 205, XP004024959, ISSN: 0167-6393
- [A] TITZE I ET AL: "Considerations in voice transformation with physiologic scaling principles", SPEECH COMMUNICATION, ELSEVIER SCIENCE PUBLISHERS, AMSTERDAM, NL, vol. 22, no. 2-3, 1 August 1997 (1997-08-01), pages 113 - 123, XP004100286, ISSN: 0167-6393
- [A] VELDHUIS R ET AL: "Time-scale and pitch modifications of speech signals and resynthesis from the discrete short-time Fourier transform", SPEECH COMMUNICATION, ELSEVIER SCIENCE PUBLISHERS, AMSTERDAM, NL, vol. 18, no. 3, 1 May 1996 (1996-05-01), pages 257 - 279, XP004018610, ISSN: 0167-6393

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)

EP 1286332 A1 20030226

DOCDB simple family (application)

EP 01402177 A 20010814