



(11) **EP 1 860 646 A3**

(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
03.09.2008 Bulletin 2008/36

(51) Int Cl.:
G10L 13/06^(2006.01) G10L 15/14^(2006.01)

(43) Date of publication A2:
28.11.2007 Bulletin 2007/48

(21) Application number: **07116266.3**

(22) Date of filing: **27.03.2003**

(84) Designated Contracting States:
DE FI FR GB NL

(30) Priority: **29.03.2002 US 369043**
14.01.2003 US 341869

(62) Document number(s) of the earlier application(s) in
accordance with Art. 76 EPC:
03100795.8 / 1 394 769

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(54) **Automatic segmentaion in speech synthesis**

(57) A method for segmenting phone labels to reduce misalignments in order to improve synthetic speech when the phone labels are concatenated comprises:
training a set of HMMs using one of a specific speaker's hand-labeled speech data and speaker-independent speech data;
segmenting the trained set of HMMs using an alignment to produce phone labels, wherein each phone label has

a spectral boundary;
using a weighted slope metric to identify bending points of spectral transitions, wherein each bending point corresponds to a spectral boundary; and
correcting a particular spectral boundary of a particular phone label if the particular spectral boundary does not coincide with a particular bending point.

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EUROPEAN SEARCH REPORT

Application Number
EP 07 11 6266

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	BRUGNARA F ET AL: "AUTOMATIC SEGMENTATION AND LABELING OF SPEECH BASED ON HIDDEN MARKOV MODELS" SPEECH COMMUNICATION, ELSEVIER SCIENCE PUBLISHERS, AMSTERDAM, NL, vol. 12, no. 4, 1 August 1993 (1993-08-01), pages 357-370, XP000393652 ISSN: 0167-6393 * abstract * * figures 2,3 * * table 9 * * section 1, p. 358, Introduction * * section 2.3, p. 361, Unit HMM training * * section 3, p. 362, System description * * page 368, right-hand column, paragraph 2 *	1-11	INV. G10L13/06 G10L15/14
A	TOLEDANO D T: "Neural network boundary refining for automatic speech segmentation" 2000 IEEE INTERNATIONAL CONFERENCE ON ACOUSTICS, SPEECH, AND SIGNAL, vol. 6, 5 June 2000 (2000-06-05), pages 3438-3441, XP010505636 * abstract * * section 2, p. 3438, The pre-existing system *	1-11	TECHNICAL FIELDS SEARCHED (IPC) G10L
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 21 July 2008	Examiner Chétry, Nicolas
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			

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EPO FORM 1503 03.82 (P04C01)



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EUROPEAN SEARCH REPORT

Application Number
EP 07 11 6266

DOCUMENTS CONSIDERED TO BE RELEVANT			
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A	EP 1 035 537 A (FRANK ARMIN ;MATSUSHITA ELECTRIC IND CO LTD (JP)) 13 September 2000 (2000-09-13) * paragraph [0016] - paragraph [0036] * * figures 2,3 *	1-11	TECHNICAL FIELDS SEARCHED (IPC)
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 21 July 2008	Examiner Chétry, Nicolas
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 07 11 6266

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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21-07-2008

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