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(54) Method and apparatus for synthesising an emotion conveyed on a sound

(57) An emotion conveyed on a sound is synthesised by selectively modifying elementary sound portions (S) thereof prior to delivering the sound through an operator application step (S10, S16, S20) in which at least one operator (OP, OD; OI) is selectively applied to the elementary sound portions (S) to impose a specific modification in a characteristic, such as pitch and/or duration in accordance with an emotion to be synthesised.

This can be achieved by applying at least one operator (Olr, Olf, Olsu, Olsd) to modify an intensity characteristic of an elementary sound portion, and/or an operator (OPr, OPf) for selectively causing the time evolution of the pitch of an elementary sound portion (S) to rise or fall according to an imposed slope characteristic (Prs, Pfs), and/or an operator (OPsu, OPsd) for selectively causing the time evolution of the pitch of an elementary sound portion (S) to rise or fall uniformly by a determined value (Psu, Psd), and/or an operator (ODd, Odc) for selectively causing the duration (tl) of an elementary sound portion (S) to increase or decrease by a determined value (D).

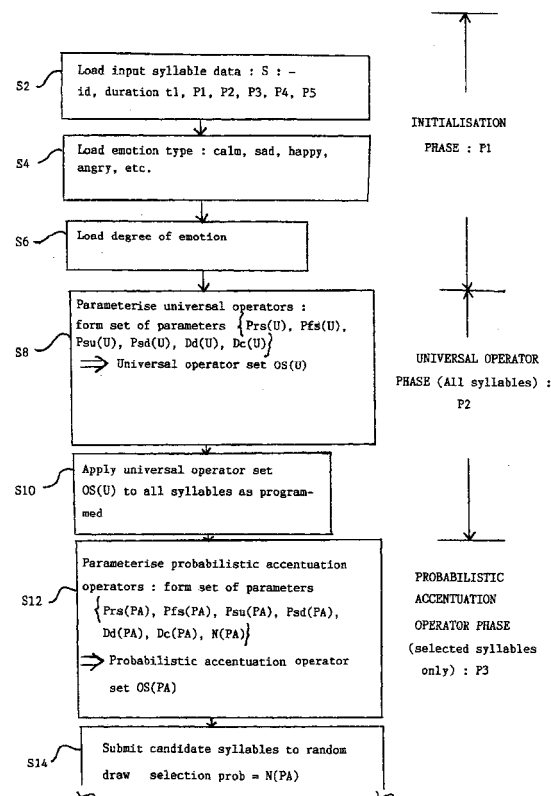
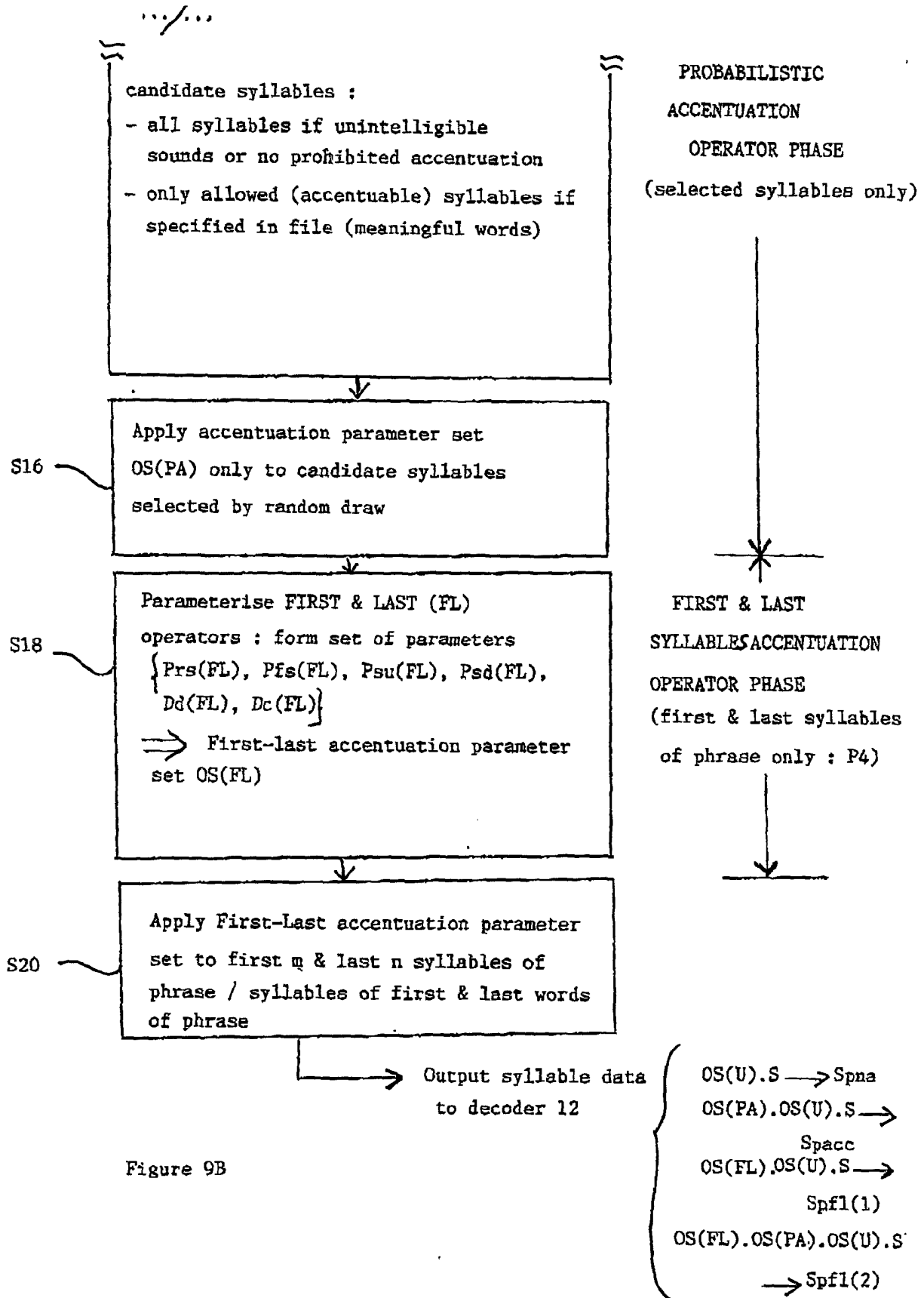


Figure 9A

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EUROPEAN SEARCH REPORT

Application Number
EP 01 40 1880

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X	US 6 212 502 B1 (BREESE JOHN S ET AL) 3 April 2001 (2001-04-03)	1-5, 8-10, 17-26, 30-32	
A	* column 8, line 5 - line 22 * * column 9, line 58 - line 63; figure 17 * * column 17, line 9 - line 26 * * column 18, line 35 - line 45 * -----	6,7, 11-16, 26,27,29	
X	GALANIS D ET AL: "Investigating emotional speech parameters for speech synthesis" ELECTRONICS, CIRCUITS, AND SYSTEMS, 1996. ICECS '96., PROCEEDINGS OF THE THIRD IEEE INTERNATIONAL CONFERENCE ON RODOS, GREECE 13-16 OCT. 1996, NEW YORK, NY, USA, IEEE, US, 13 October 1996 (1996-10-13), pages 1227-1230, XP010217293 ISBN: 0-7803-3650-X * abstract; table 4 * * paragraph [0004] * ----- -/--	1-5, 8-10, 17-26, 30-32	TECHNICAL FIELDS SEARCHED (Int.Cl.7) G10L
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 29 July 2004	Examiner De Vos, L
CATEGORY OF CITED DOCUMENTS 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		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	

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EUROPEAN SEARCH REPORT

Application Number
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CATEGORY OF CITED DOCUMENTS 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		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	

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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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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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82