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(54) **Coding of acoustic waveforms.**

(57) Encoding techniques and devices based on a sinusoidal speech representation model are disclosed. In one aspect of the invention, a pitch-adaptive channel encoding technique for amplitude coding is disclosed in which the channel spacing is varied in accordance with the pitch of the speaker's voice. In another aspect of the invention, a phase synthesis technique is disclosed which locks rapidly-varying phases into synchrony with the phase of the fundamental. Phase coding techniques which introduce a voice-dependent random phase and a pitch-adaptive quadratic phase dispersion are also disclosed.

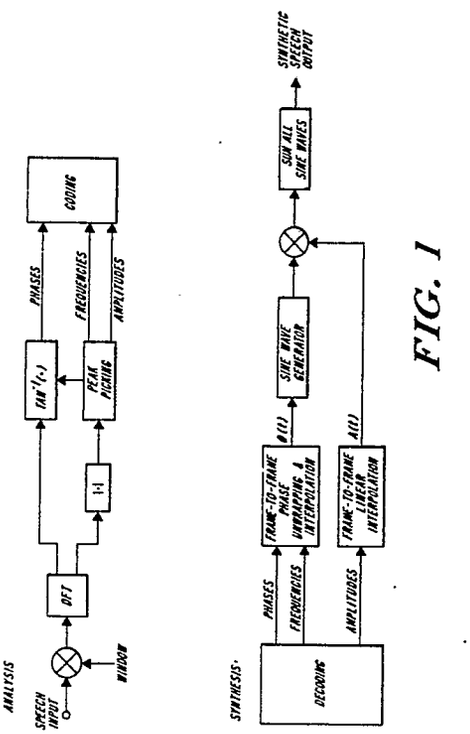

FIG. 1

EP 0 285 276 A3

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EUROPEAN SEARCH REPORT

Application Number

EP 88 30 2063

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)
X	ICASSP 85 PROCEEDINGS IEEE INTERNATIONAL CONFERENCE ON ACOUSTICS, SPEECH, AND SIGNAL PROCESSING, Tampa, 26th-29th March 1985, vol. 3, pages 945-948, IEEE; R.J. McAULAY et al.: "Mid-rate coding based on a sinusoidal representation of speech" * Whole document *	7-9,17-19	G 10 L 7/00
A	Idem	1,11	
X,D	WO-A-8 605 617 (MASSACHUSETTS INSTITUTE OF TECHNOLOGY) * Claims 1,5,6,12,13,26,29,37,38,51,52 *	7,8,17,18	
A		1,11	
A	ICASSP 85 PROCEEDINGS IEEE INTERNATIONAL CONFERENCE ON ACOUSTICS, SPEECH, AND SIGNAL PROCESSING, Tampa, 26th-29th March 1985, vol. 2, pages 489-492, IEEE; T.E. QUATIERI et al.: "Speech transformations based on a sinusoidal representation" * Whole document *	1,3,11,13	TECHNICAL FIELDS SEARCHED (Int. Cl.4) G 10 L 7/00
X,P	ICASSP 87 PROCEEDINGS IEEE INTERNATIONAL CONFERENCE ON ACOUSTICS, SPEECH, AND SIGNAL PROCESSING, Dallas, 6th-9th April 1987, vol. 3, pages 1645-1648, IEEE; R.J. McAULAY et al.: "Multirate sinusoidal transform coding at rates from 2.4 KBPS to 8 KBPS" * Whole document *	1-20	

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	13-09-1989	DELPORTE B.P.M.

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
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E : earlier patent document, but published on, or after the filing date
D : document cited in the application
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