



PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : G10L 5/04		A1	(11) International Publication Number: WO 99/35639
			(43) International Publication Date: 15 July 1999 (15.07.99)
(21) International Application Number: PCT/IL98/00341		(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, (SG) SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).	
(22) International Filing Date: 22 July 1998 (22.07.98)			
(30) Priority Data: 09/002,616 8 January 1998 (08.01.98) US			
(71) Applicant (for all designated States except US): ART-ADVANCED RECOGNITION TECHNOLOGIES LTD [IL/IL]; Brodezky Street 43, 61398 Tel Aviv (IL).			
(72) Inventors; and (75) Inventors/Applicants (for US only): HERSHKOVITS, Yehuda [IL/IL]; Kfar Hanagid, 76875 Mobile Post Emek Sorek (IL); ILAN, Gabriel [IL/IL]; Eliyahu Hakim Street 12, 69120 Tel Aviv (IL).			
(74) Agent: EITAN, PEARL, LATZER & COHEN-ZEDEK; Gav Yam Center 2, Shenkar Street 7, 46725 Herzlia (IL).			

Published
With international search report.

(54) Title: **A VOCODER-BASED VOICE RECOGNIZER**

(57) Abstract

A vocoder based voice recognizer recognizes a spoken word using linear prediction coding based vocoder data without completely reconstructing the voice data. The recognizer generates at least one energy estimate per frame of the vocoder data (60) and searches for word boundaries in the vocoder data (64) using the associated energy estimates. If a word is found (66), the linear prediction coding word parameters are extracted (68) from the vocoder data associated with the word and recognition features are calculated (70) from the extracted linear prediction coding word parameters. Finally, the recognition features are matched with previously stored recognition features of other words (40), thereby recognizing the spoken word.

