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(54) Title: VOICE-BASED MULTIMODAL SPEAKER AUTHENTICATION USING ADAPTIVE TRAINING AND APPLICATIONS THEREOF

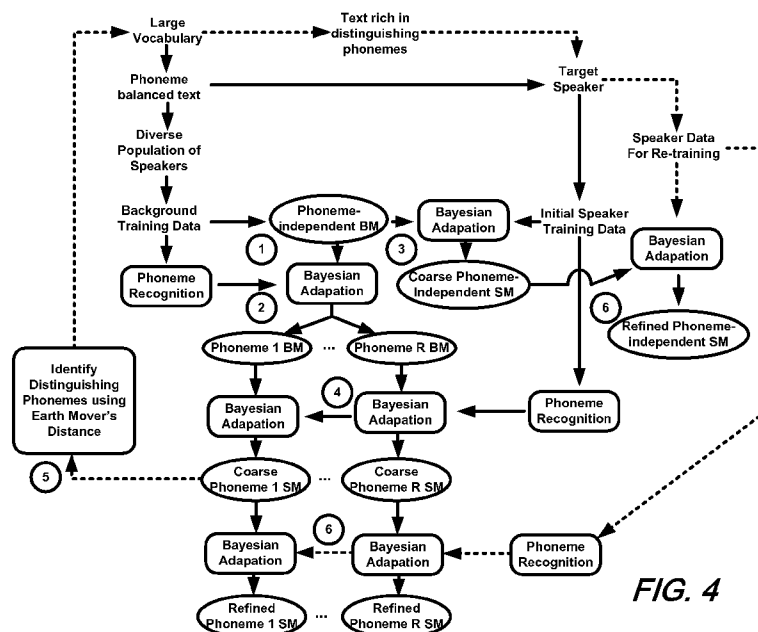


FIG. 4

(57) Abstract: A voice based multimodal speaker authentication method and telecommunications application thereof employing a speaker adaptive method for training (240) phoneme specific Gaussian mixture models (260, 270). Applied to telecommunications services, the method may advantageously be implemented in contemporary wireless terminals.



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A. CLASSIFICATION OF SUBJECT MATTER

IPC: H04M 1/64(2006.01);3/00(2006.01);G10L 15/00(2006.01),17/00(2006.01)

USPC: 379/88.02,189;704/241,250

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Google Scholar

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,088,428 A1 (TRANDAL et al) 11 July 2000 (11.07.2000), col. 2, lines 47-65; col. 4, lines 20-23, 52-55; col. 9, lines 34-53; col. 17, lines 45-67	1-3 and 9
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Y		4 and 10
Y	Schalkwyk et al. 'Speaker Verification With Low Storage Requirements', 1996 IEEE International Conference on Acoustics, Speech, and Signal Processing, 1996. ICASSP-96. Conference Proceedings. 7-10 May 1996 pages 693-696, page 694, section 3.1	4 and 10



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