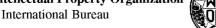
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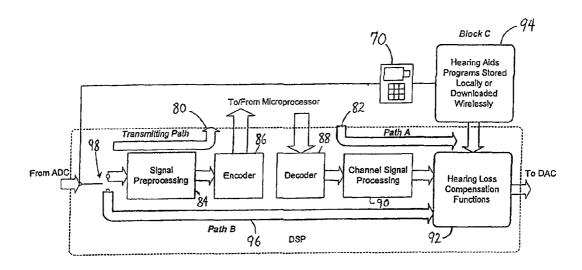
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(54) Title: DIGITAL CELL PHONE WITH HEARING AID FUNCTIONALITY



(57) Abstract: A digital cell phone with built in hearing aid functionality, includes: a housing; a digital signal processor (DSP) contained within the housing for encoding and decoding digital data; a hearing loss compensation module, coupled to the DSP, for processing digital data in accordance with a hearing loss compensation algorithm; a digital-to-analog converter (DAC), coupled to the hearing loss compensation module, for receiving the processed digital data from the hearing loss compensation circuit and converting the data into an analog signal; and a speaker, coupled to the DAC, for receiving the analog signal and converting the analog signal into sound waves adapted for a hearing impaired listener.

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International application No.

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Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)			
C. DOCUMENTS CONSIDERED TO BE RELEVANT			
Category *	Citation of document, with indication, where a		
X Y	US2003/0064746 A1 (RADER et al) 03 April 2003 (03.04.2003), paragraphs 8-9,34-39,52-64,122-123.		9,52- 1-4,7-12,14-25,28- 33,35-38,40-41
I			5,6,13,26,27,34
Y	US 2001/0041602 A1 (BERGER et al) 15 November 2001 (15.11.2001), paragraph 33.		5,26
Y	US 5,721,783 A (ANDERSON, James C.) 24 February 1998 (24.02.1998), column 2, lines 24-51; column 5, lines 3-21.		6,13,27
Y	US 5,276,739 A (Krokstad et al) 04 January 1994 (04	.01.1994),column 7, lines 2-7,53	-58. 34
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