

**SPEECH ENCODING METHOD AND APPARATUS AND SPEECH DECODING
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ABSTRACT

A pitch detection method and apparatus capable of realizing high-precision pitch detection even for speech signals in which half-pitch or double-pitch exhibits stronger autocorrelation than the pitch for detection. An input speech signal is judged as to voicedness or unvoicedness and a voiced portion and an unvoiced portion of the input speech signal are encoded by a sinusoidal analytic encoding unit 114 and by a code excitation encoding unit 120, respectively, for producing respective encoded outputs. The sinusoidal analytic encoding unit 114 performs pitch search on the encoded outputs for finding the pitch information from the input speech signal and sets the high-reliability pitch information based on the detected pitch information. The results of pitch detection are determined based on the so-set high-reliability pitch information. A speech encoding method and a speech encoding device employing the pitch detection method are also disclosed.

Figure 3