

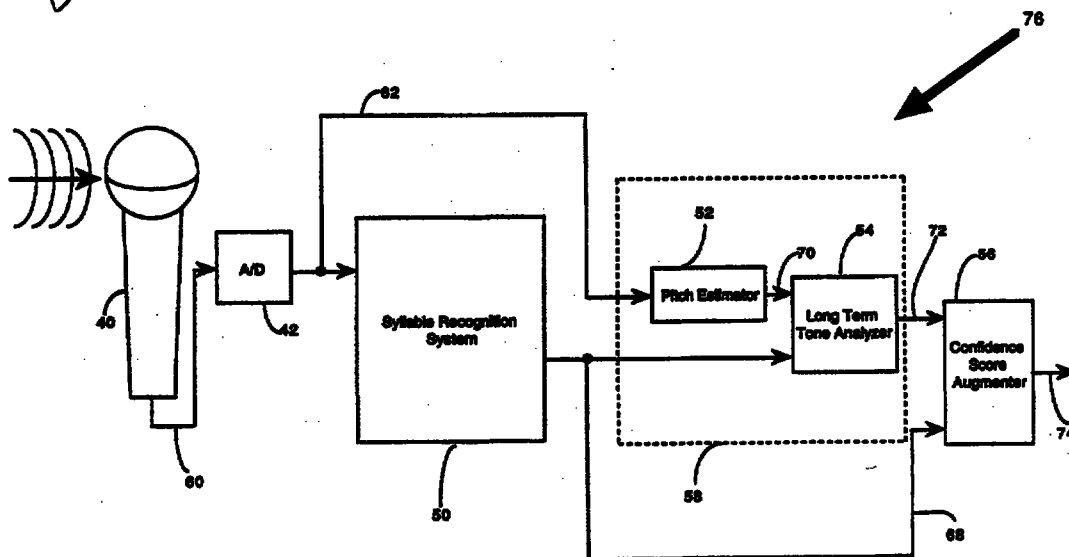


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(54) Title: CONTINUOUS MANDARIN CHINESE SPEECH RECOGNITION SYSTEM HAVING AN INTEGRATED TONE CLASSIFIER



(57) Abstract

A speech recognition system for continuous Mandarin Chinese speech comprises a microphone, and A/D converter, a syllable recognition system, an integrated tone classifier, and a confidence score augmentor. The syllable recognition system generates N-best theories with initial confidence scores. The integrated tone classifier has a pitch estimator to estimate the pitch of the input once and a long-term tone analyzer to segment the estimated pitch according to the syllables of each of the N-best theories. The long-term tone analyzer performs long-term tonal analysis on the segmented, estimated pitch and generates a long-term tonal confidence signal. The confidence score augmentor receives the initial confidence scores and the long-term tonal confidence signals, modifies each initial confidence score according to the corresponding long-term tonal confidence signal, re-ranks the N-best theories according to the augmented confidence scores, and outputs the N-best theories.

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