Design a Computer Assisted Mandarin Speech Learning Software for Hearing Impairment

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ABSTRACT

The thesis offers the hearing impaired a series of interface aided by the computer pronouncement, using the spectrogram and pitch contour methods, to transform phonetic information into visual feedback signals. The software design is accomplished by the figured interface. Yet the user’s operational environment are separated into two parts. One is the assistant in colloquial language correction; the other is the correction of articulation and morpheme. Users can compile demonstrative sound files by themselves through both of them. We demonstrate the experiment by the hearing impaired. During the process, users continuously get feedback from the interface. Try to change the ways of users’ pronouncement, with the help of the imitator, and some improvement can be achieved.

Keywords: spectrogram; pitch contour; computer; design; computer; design; formant; endpoint detection