


Original Paper

Developing a Computer Based Audiometer for Hearing Loss Screening

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Abstract

Audiometric test is an ongoing task in almost all human activities. It presents a fundamental demand related to safety and health. Due to that, there is a need for sophisticated instrument to measure accurately the hearing loss within the human activities, especially for the people who work in noisy fields. The objective of this work is to develop the hearing loss screening system by involving the computer software based audiometer. A friendly user interface has been designed to guide the users in operating the audiometer, and then the practical of hearing loss test to the patients has been conducted in order to evaluate the performance of audiometer software. From the practical results, it can be said that the designed computer based audiometer has performed a satisfactory results. Wherein, all functions of audiometer which are displayed on graphical user interface have been working as expected. Thus, the audiometric test result was automatically plotted in the audiogram curves. The calibration of audiometer was done by utilizing artificial ear, standard microphone and frequency analyzer. The calibration result for computer based audiometer is reported in this paper.

Keywords

Audiometric test – Computer based audiometer – Hearing loss – Audiogram – Calibration