Lip Localization Technique for Myanmar Consonants Recognition Based on Lip Movements

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Abstract : Lip reading system is one of the different supportive technologies for hearing impaired, or elderly people or non-native speakers. For normal hearing persons in noisy environments or in conditions where the audio signal is not available, lip reading techniques can be used to increase their understanding of spoken language. Hearing impaired persons have used lip reading techniques as important tools to find out what was said by other people without hearing voice. Thus, visual speech information is important and become active research area. Using visual information from lip movements can improve the accuracy and robustness of a speech recognition system and the need for lip reading system is ever increasing for every language. However, the recognition of lip movement is a difficult task because of the region of interest (ROI) is nonlinear and noisy. Therefore, this paper proposes method to detect the accurate lips shape and to localize lip movement towards automatic lip tracking by using the combination of Otsu global thresholding technique and Moore Neighborhood Tracing Algorithm. Proposed method shows how accurate lip localization and tracking which is useful for speech recognition. In this work of study and experiments will be carried out the automatic lip localizing the lip shape for Myanmar consonants using the only visual information from lip movements which is useful for visual speech of Myanmar languages.

Keywords : lip reading, lip localization, lip tracking, Moore neighborhood tracing algorithm

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