

Extracting features point of lip movement for computer-based lip reading system

Abstract

Lip reading is a technique of communication used by a hard hearing person in their conversation between themselves or with the normal person. Sometime the word they understand is not the same as what the other speaker talk. Computer-based lip reading system may help them to track those words based on the movement of the lips. When speak, lip make a movement that may differ between several words. For the computer to recognize the spoken word, feature from the lip need to be extracted and is stored in the database. A surface area of the lip is proposed as the feature of the lip movement. The horizontal and vertical distances of the lip are extracted to determine the surface area. Data from the lip feature then been resample to estimate some parameter and their reliability. Result from the resample then will be initialized to reduce memory usage in the database. In the experiments, several spoken words at the hospital have been chosen. The experimental results show that the ellipse feature could be employed to train the computer understands the spoken word from the human.

Keywords — Ellipse, image processing, lip tracking, speech