

Public Abstract

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Title:TONGUE IMAGE DIFFERENCE DETECTION

Based on tradition Chinese medicine (TCM) theories, all the import human organs have connections with the tongue. So the tongue can be a very important indication of the health status. For this reason, the changing of the tongue surface can be very important health information.

This thesis proposes a tongue changing detection solution that can keep track of the changing of the tongue. Based on the tongue images this method can detect the changing areas on the tongue within a few seconds of time. Also, this thesis introduces the system architecture of the iTongue system.

Differences in tongue images during detection process create several difficulties. First, tongues are not rigid bodies, so it is difficult to register the tongue images due to changes in position (movement). Second, light conditions can cause tongue images to vary from each other causing the color to change and leading to an inaccuracy in the tongue difference detection algorithm. Third, since the first step of registering tongue images is so difficult, the detection algorithm relies on tongue image segmentation results. In this thesis, we will talk about solutions to these difficulties.