

CONTROLLING WINDOWS MEDIA PLAYER WITH HAND SIGNALS

A dissertation submitted to the

Industrial Information Technology Degree Program,

Uva Wellassa University

In partial fulfillment of the requirements for the award of the

Degree in Bachelor of Industrial Information Technology

by

**MATHAKADEERA WEERASINGHA KANKANAMALAGE
MAHESHIKA PAVITHRANI**

UWU/IIT/09/0047

Industrial Information Technology

Uva Wellassa University, Sri Lanka

October 2013

ABSTRACT

In this paper, a real-time Human-Computer Interaction (HCI) based on the hand gesture recognition is proposed. HCI is moving more and more natural and intuitive way to be used. One of the important parts of our body is our hand which is most frequently used for the Interaction in Digital Environment and thus complexity and flexibility of motion of hands are the research topics. And in this paper about applying this concept for Windows Media Player that is the most fervently use player. It is very comfortable to have hand signal control system for Windows Media Player .Because it is an application frequently that use in day-to-day Life. The results show that hand gesture recondition used for interaction is better than normal static keyboard as the interaction process is more accurate and natural in dynamic environment with no distance limitations. Also it enhances the user's interaction and immersion feeling. Virtual environments have always been considered as a means for more visceral and efficient human computer interaction by a diversified range of applications. Evolution of ubiquitous computing, current user interaction approaches with keyboard, mouse and pen are not sufficient for the still widening spectrum of Human computer interaction. Gloves and sensor based trackers are unwieldy, constraining and uncomfortable to use. Due to the limitation of these devices the useable command set based diligences is also limited. Direct use of hands as an input device is an innovative method for providing natural Human Computer Interaction The research effort centralizes on the efforts of implementing an application that employs computer vision algorithms and gesture recognition techniques base on skin colors and shape which in turn results in developing a low cost interface device for interacting with computer using hand gestures technique for Windows Media Player.