

## **ABSTRACT**

In medical environment, a massage is an effort to prevent and treat diseases. A massage is usually done by using hand or some equipment. At this project, a massage specially for sole of human foot, which can be done by an automatic equipment based on PC and also can be done by our hand with PC as information media that make available map of diseases reflection point.

Reflection point at sole of human foot is published by PC media. However, by choosing name of diseases at list of diseases that is available on PC, we can find reflection point to get an automatic massage by an equipment of massage based on PC.

At this final project, will be designed and implemented a massage in an automatic manner of three axis (X, Y, Z) by microcontroller AT89S52 that can communicate as serial with Visual Basic 6.0 software by entering coordinate digit that be desired (the position of point 0,0,0 has been known appropriate with reflection point of diseases). In execution, focus at accuracy of massage and serial communication between microcontroller and Visual Basic 6.0 that has been converted reflection coordinate digit (millimeter becomes bits of information code).

To test accuracy of massage, can do the searching algorithm of precise conversion so will get coordinate points of reflection and communicate with microcontroller that will actuate the engine of stepper appropriate with bit of information that is sent. Whereas, that can be gotten automatic massage is foot has a measurement of 38, 39, 40, 41 and 42.

The result will be desired of this final project is fabricating an automatic massage equipment of three axis with consideration accuracy of reflection point only some millimeter and serial communication between computer and microcontroller