

# The Michelangelo Hand

Kelsey Foster, *Biomedical Engineering, University of Rhode Island*  
BME 181, Second Presentation, April 8, 2013 <kelsey\_foster@my.uri.edu>

**Abstract**—The Michelangelo hand is the first prosthetic hand with an opposable thumb unit that is all nerve controlled. This prosthetic has been in development for over a decade

## I. INTRODUCTION

THE Michelangelo hand is the newest thing in hand prosthetics. With its revolutionary design and mechanics the hand is designed to function by nerve signals sent from the brain, no outside action needed. This is very important for .

## II. METHODS

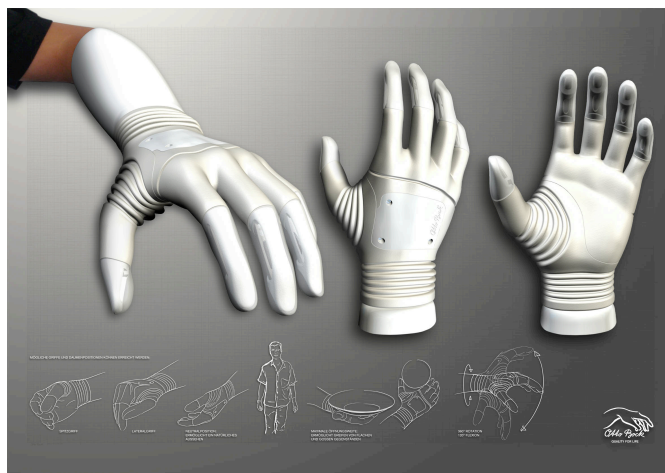
The hand functions by using two drive units. The first unit controls the gripping and the power, the second unit controls the thumb alone. This means that it can control the position of the thumb electronically. In some other prosthetics you can have a thumb that must be pre-positioned but that does not always work well with the user because it adds more work to have less functionality.



## III. RESULTS

The hand is now the most effective prosthetic hand on the

market, however it is very expensive and this device is just being released to American civilians. This device could change the way that all prosthetics are developed in the future. The functionality of this new two drive design could be used in foot prosthetics and shoulder prosthetics alike.



## IV. DISCUSSION

The Michelangelo hand is the breakthrough in prosthetics that we need to continue to create appendages that function almost seamlessly with the human body. The more something looks and moves like its human, the more useful it will be to the people who need them. The obvious draw backs with this device would be that it is expensive and there aren't many to apply to those in need at the moment. Another drawback for this would be the moral implications between human and machine. This raises questions like, "How much is too much?" and whether people respond well to this is based on many things such as religious views, and other moral ideals. People may not understand now why this breakthrough could help so many, but with the advancement of science we are going to see many more things like this to come which will only keep the ethical debate alive. .

## REFERENCES

- [1] [www.armdynamics.com/pages/michelangelo](http://www.armdynamics.com/pages/michelangelo)
- [2] [www.hanger.com/prosthetics/services/technology/pages/michelangelo-hand.aspx](http://www.hanger.com/prosthetics/services/technology/pages/michelangelo-hand.aspx)
- [3] <http://www.coroflot.com/cushy/michelangelo-hand>