# Final Research Document

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## 1 What

For my project I will use an N64 controller to give input commands to an Arduino that will change fan a computer fan's speed.

## 2 Why

I have chosen these components because I have each item readily available; N64 only has 3 pins–ground, data, and 3.3v; CPU fans work using PWM (Pulse Width Modulation); and the Arduino is easily able to interface with each of these.

## 3 How

I will connect the Arduino to the controller using standard test cables and I will power the fan using a battery and control the speed using PWM on the Arduino.

## 4 Challenges

Some of the challenges I foresee are...

- issues getting the controller to interface with the Arduino.

- powering the fan with the Arduino

- Arduino Assembly is hard...

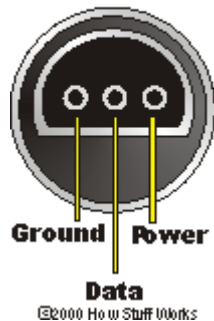- time constraints...

# 5    Solutions

The solutions are...

- if I can't interface with an N64 controller I can make my own controller using buttons and variable resisters

- I can power the fans using an external source like batteries or a wall adapter.

- I can suck it up and just get the project done.

- I realize that I'm working on other projects that are going to require my attention that's why I made this project easy. Should it be too easy I can increase the complexity to a simple game using the remote like Tetris.

# 6    Explanations

I don't think I have anything that needs explaining at this point.

# 7    Visualizations



# 8    Sources

http://s.hswstatic.com/gif/n64-pinout.gif