

GROUP NO : 3

ECE -511

David Fry

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COPY

CAT CAR

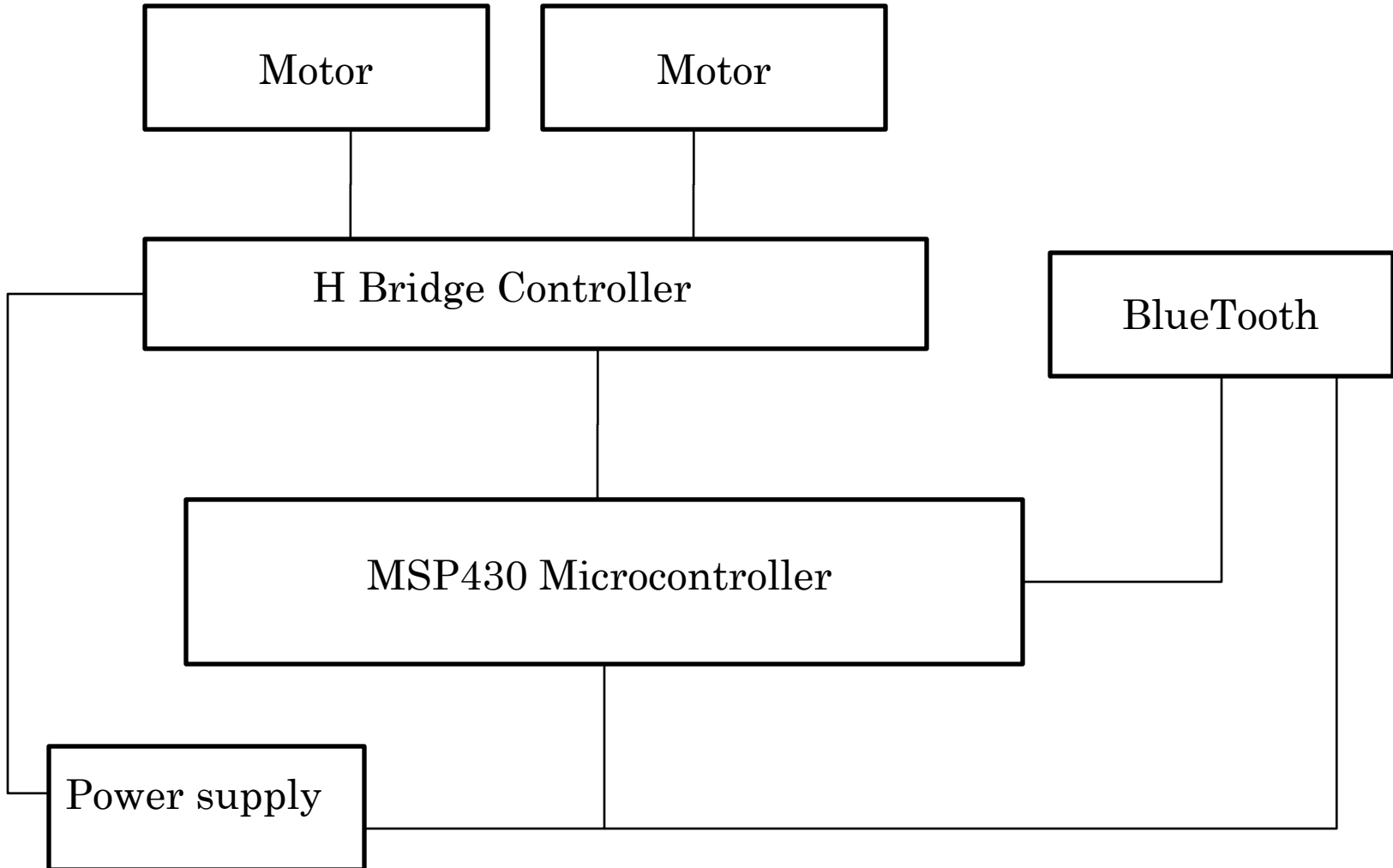


OVERVIEW

We will be creating a vehicle that connects over Bluetooth and moves with the instructions given by a user. Our car will also be able to save the instructions given and replay them later when the user requests.



BLOCK DIAGRAM



COMPONENTS

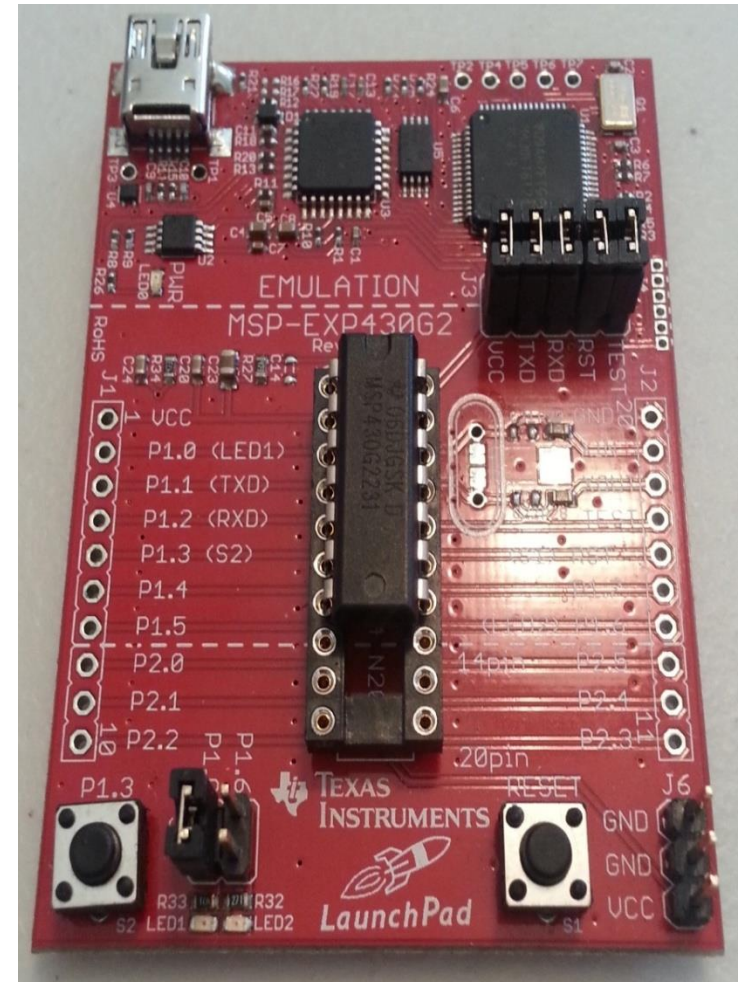
MSP430

16 bit Microcontroller

- MSP430G2153 ordered as an alternate

PROGRESS :

TESTED AND IS OK



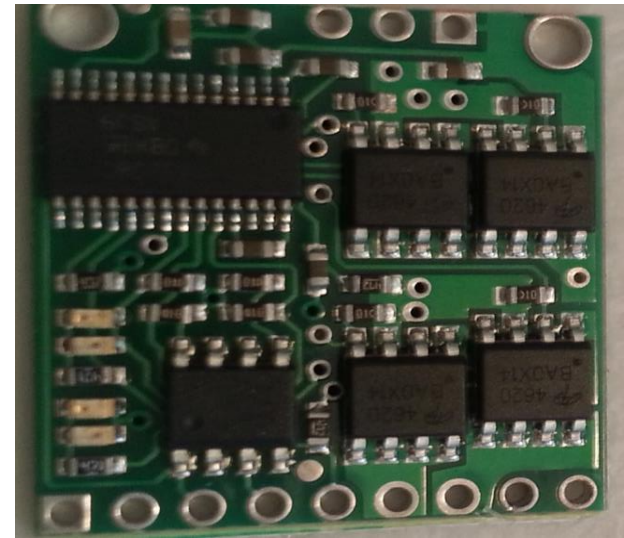
POWER SUPPLY

- **Input from 5v to 30v**
- **Output from 3v to 24v**



H BRIDGE CONTROLLER

- **SPI interface**
- http://www.pololu.com/file/0J59/smc05a_guide.pdf
- **10 A Maximum output**
- **0-7 V Adjustable output**
- **600 Hz onboard PWM**
- **Tested and is OK**



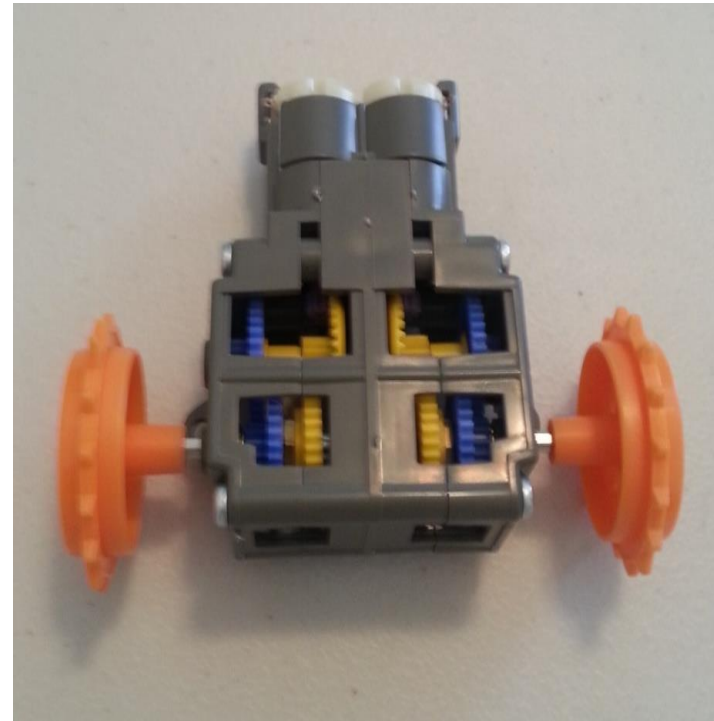
BLUETOOTH MODULE

- **SPI interface**
- **3.3V**
- **Class 1 Bluetooth 2.1 + EDR module**
- <http://www.microchip.com/wwwproducts/Devices.aspx?dDocName=en558328>
- **Acquired**



MOTOR UNIT

- Adjustable gear
- Independent left and right
- Low voltage
- Connects to H-Bridge
- 1039 to 38 RPM
- Tested and working



TASK DIVISION

- David Fry** - Hardware and Integration
- UpendarReddy**
- Mamidi** - H-bridge controller Interface
- SangaMitraReddy** - Bluetooth Interface
- Raghunath**
- Pasumarthi** - Software, Android App

OVERALL PROGRESS

Parts have been sourced, majority tested.



PLAN B

- **To use a wired controller as opposed to the Bluetooth module**
- **More powerful MSP with additional memory**

