University of Houston
College of Technology
Department of Engineering Technology
Computer Engineering Technology Program
ELET 4308/4108 SENIOR PROJECT

Pet Misting System

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Team 12

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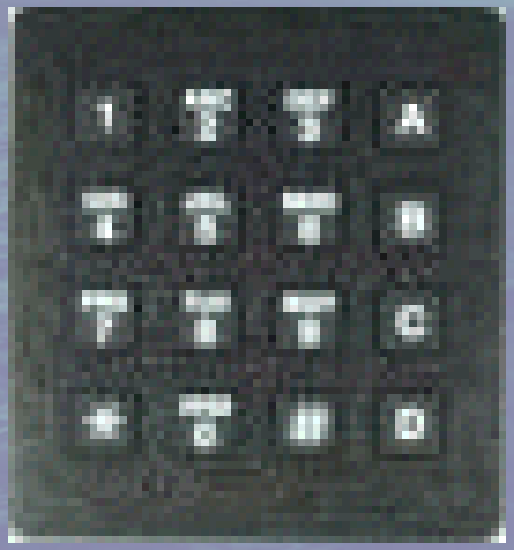
Design Objective

- The objective of this project is to create a pet misting system that is simple, affordable, and easy to use, which helps prevent the over heating of pets left outdoors.

Description

- The user will set the temperature that they want the misting system to activate.



Description

- The pet enters the pet house. This will activate the pressure sensor.

Description (Cont'd)

- The temperature Sensor will take the outside temperature.

Description (Cont'd)

- When the temperature outside reaches the user defined temperature, the misting system will activate

Description (Cont'd)

- The temperature sensor will continue to monitor the temperature. Once the temperature goes below the user defined temperature, the system will deactivate and go idle.
- If the pet leaves the pet house, the pressure sensor will detect it and deactivate the system and go idle.

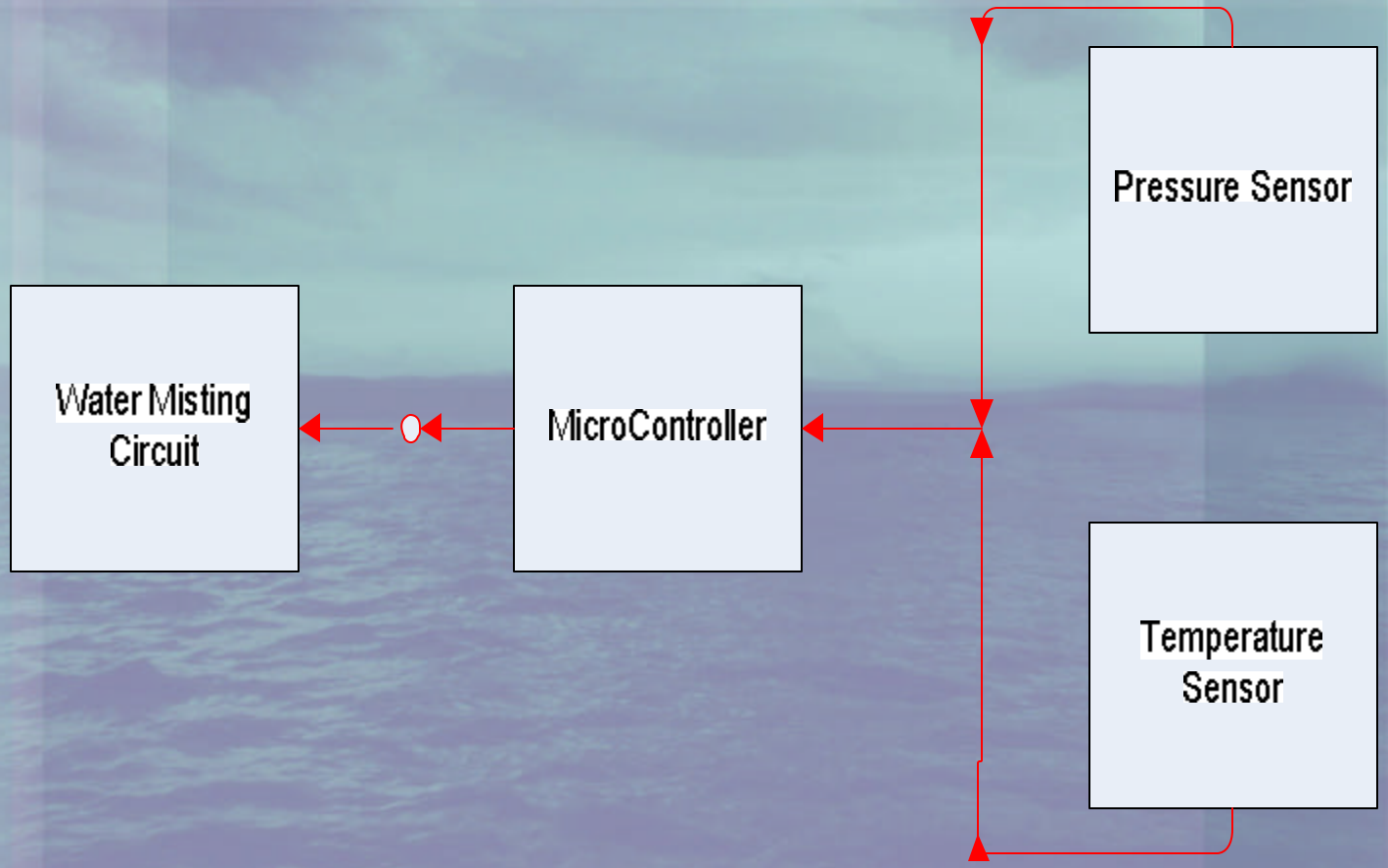
Description (Cont'd)

- While in Idle mode, the system will continue to detect the pressure. If the pressure is there it will continue to detect the temperature.

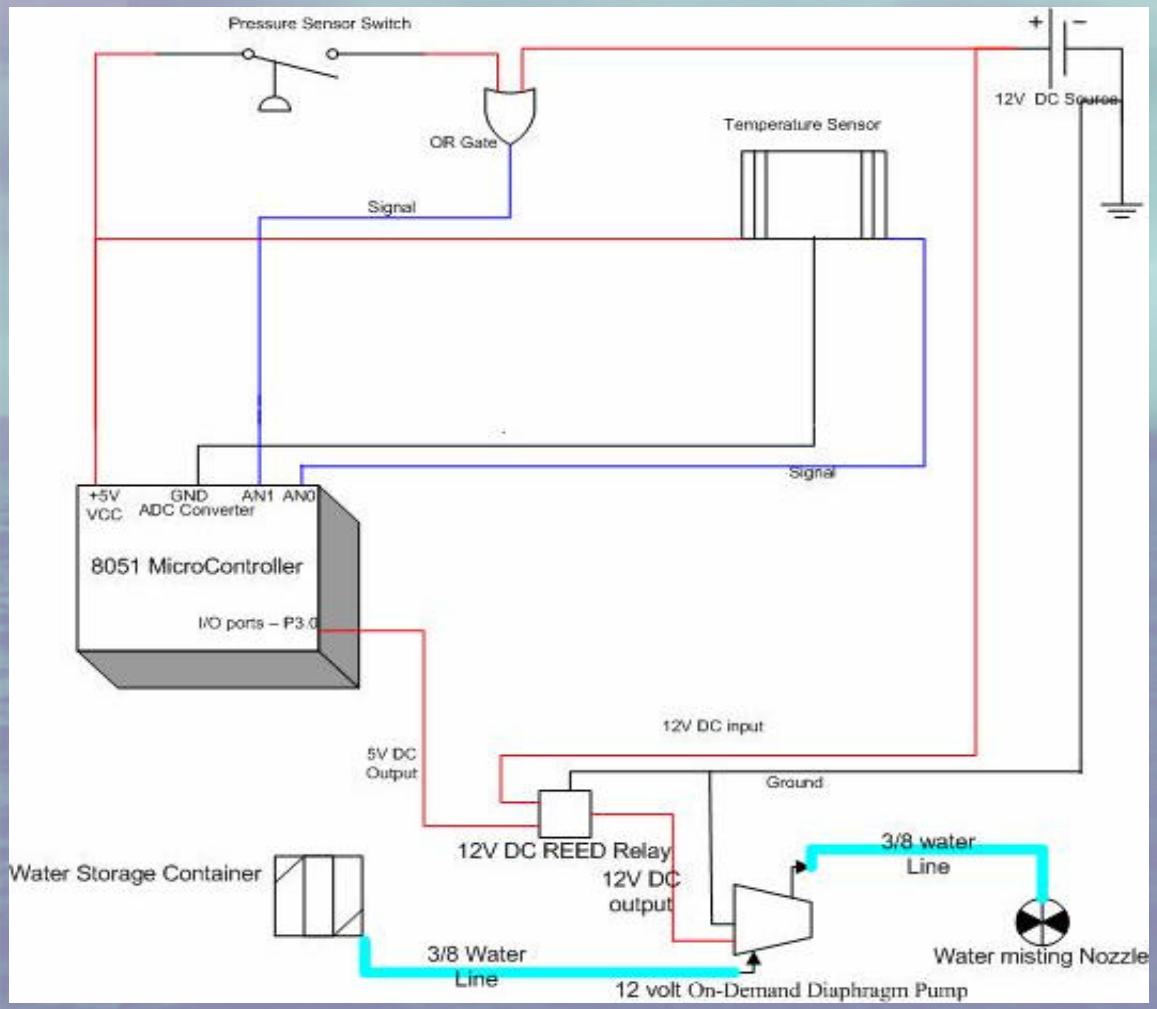
Components

- Mini-Max /51-C microcontroller
- Breadboard
- Keypad
- Pressure Sensor
- Temperature Sensor
- Water pump
- Water tubing
- Misting nozzle

Diagram of Sensors in the Circuit



Circuit Schematic



Testing

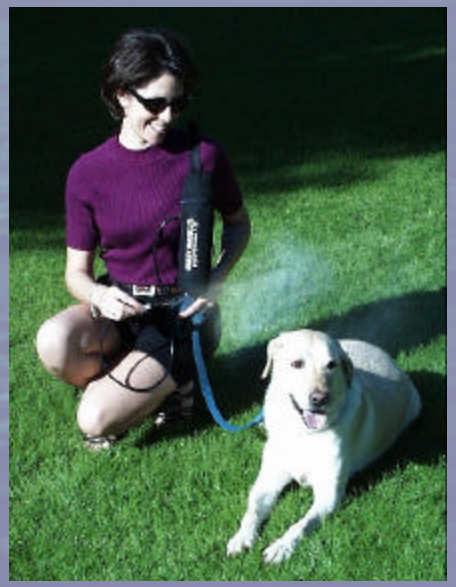
- The team used a hair dryer to test the temperature sensor

Testing (cont'd)

- The team tested the variance of pressure on the pressure mat.

Competitors

- There are no competitors to the Pet Misting System. All other misting systems on the market are manually controlled



Costs

• Microcontroller	1		$70.00
• Water pump	1		$75.00
• Water Lines	1		$10.99
• Pressure sensor	1		$38.15
• Misting nozzles	1	packet of 5	$10.99
• Temperature sensor	1		$7.99
• Plexi-Glass	1		$20.00
• Plywood	2		$39.98
• Water sealant	1		$8.99
• Relays	5		$20.61
• Miscellaneous items	1		$11.00
Total			**$313.70**

Labor Usage

- **Labor Hours**

  Approx: 230 hrs per person

- **Labor Cost**

  $30/hr per person

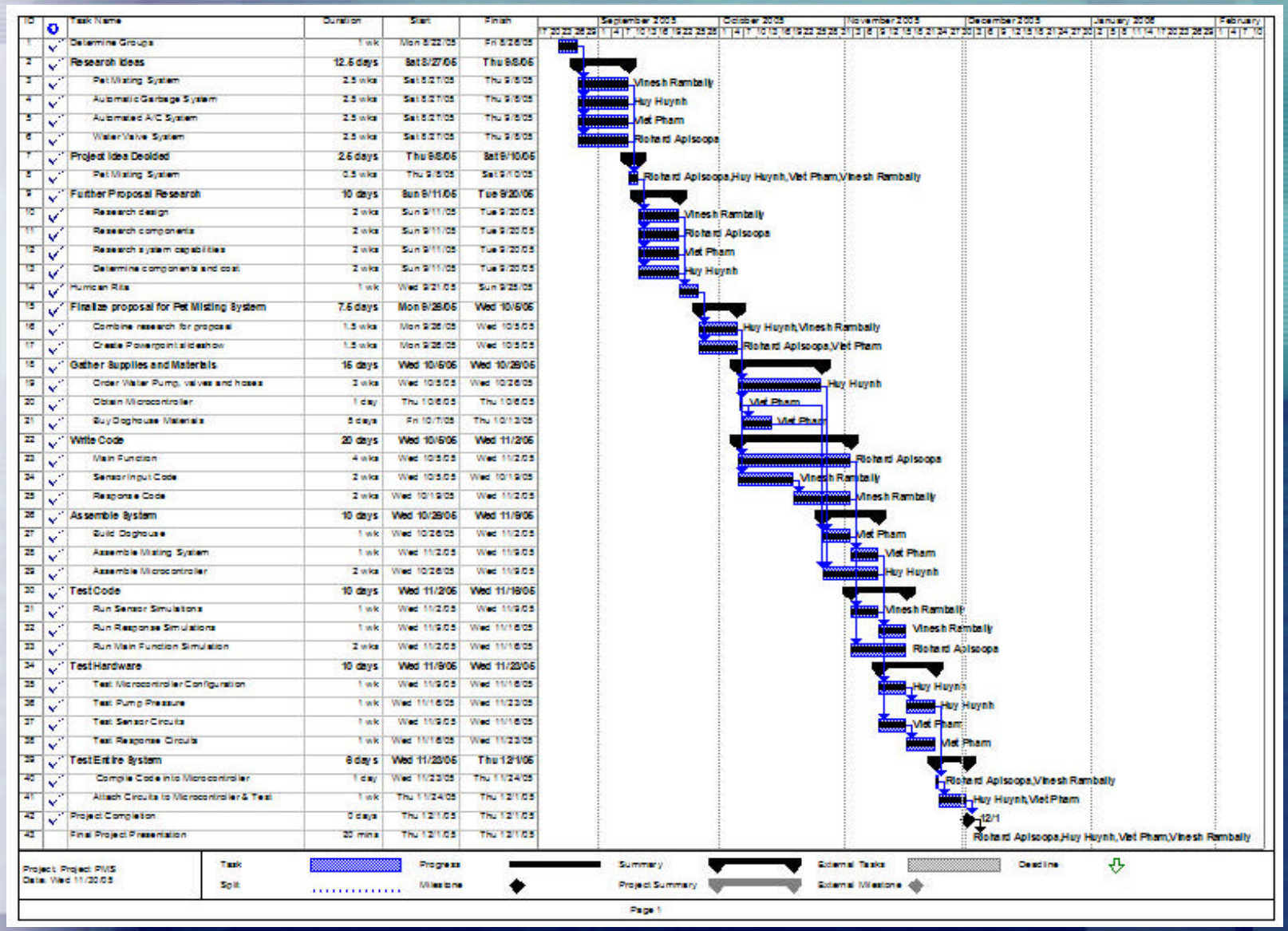
  $6,900 per person

- **Total Cost**

  $27,913.70

  (including parts)

Schedule Gant chart



Group Picture

Daring

Questions???

Work Cited

- http://www.animalaidsw.org/summer.html
- http://www.pets.ca/articles/article-heatstroke.htm

- Products on the Market:

- http://www.yourfencestore.com/dogs/kennelmist.asp
- http://www.mistymate.com/2016210.html
- http://www.bigfogg.com/patio-misting.html