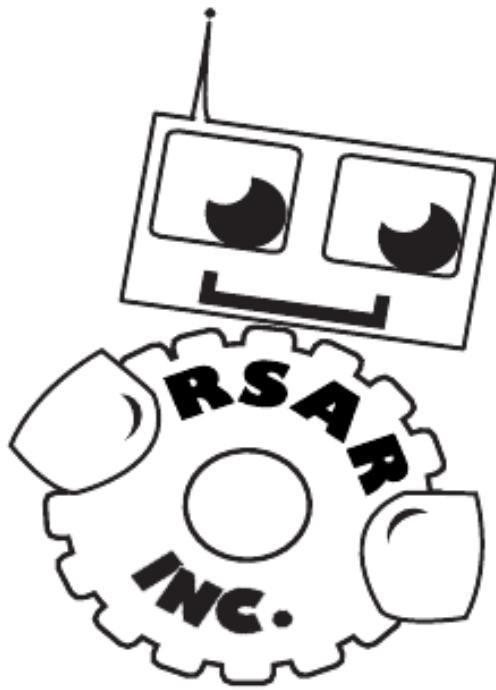


# VELOCITY PREP 2011



# R.S.A.R

“Don't risk  
a life, Save  
a life”



# DID YOU KNOW...

- 2011 is one of the worst years for earthquakes.

Month, Year	People Lost
April, 2010	11
April, 2011	361

# JAPAN



- 10,000 people missing

# HAITI EARTHQUAKE



- 10,300 people missing or dead

# 9/11 ATTACK



- About 3,000 people dead
- 343 firefighter or paramedics killed

# HURRICANE KATRINA



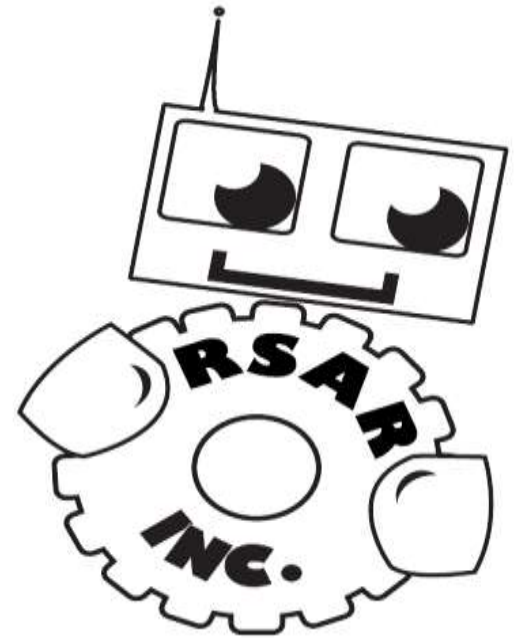
- Reported missing: 6,600

# R.S.A.R. INC.

- *“Robo Search and Rescue”*

- Avoid putting people in any type of danger, instead use a robot.

- Created to search and locate



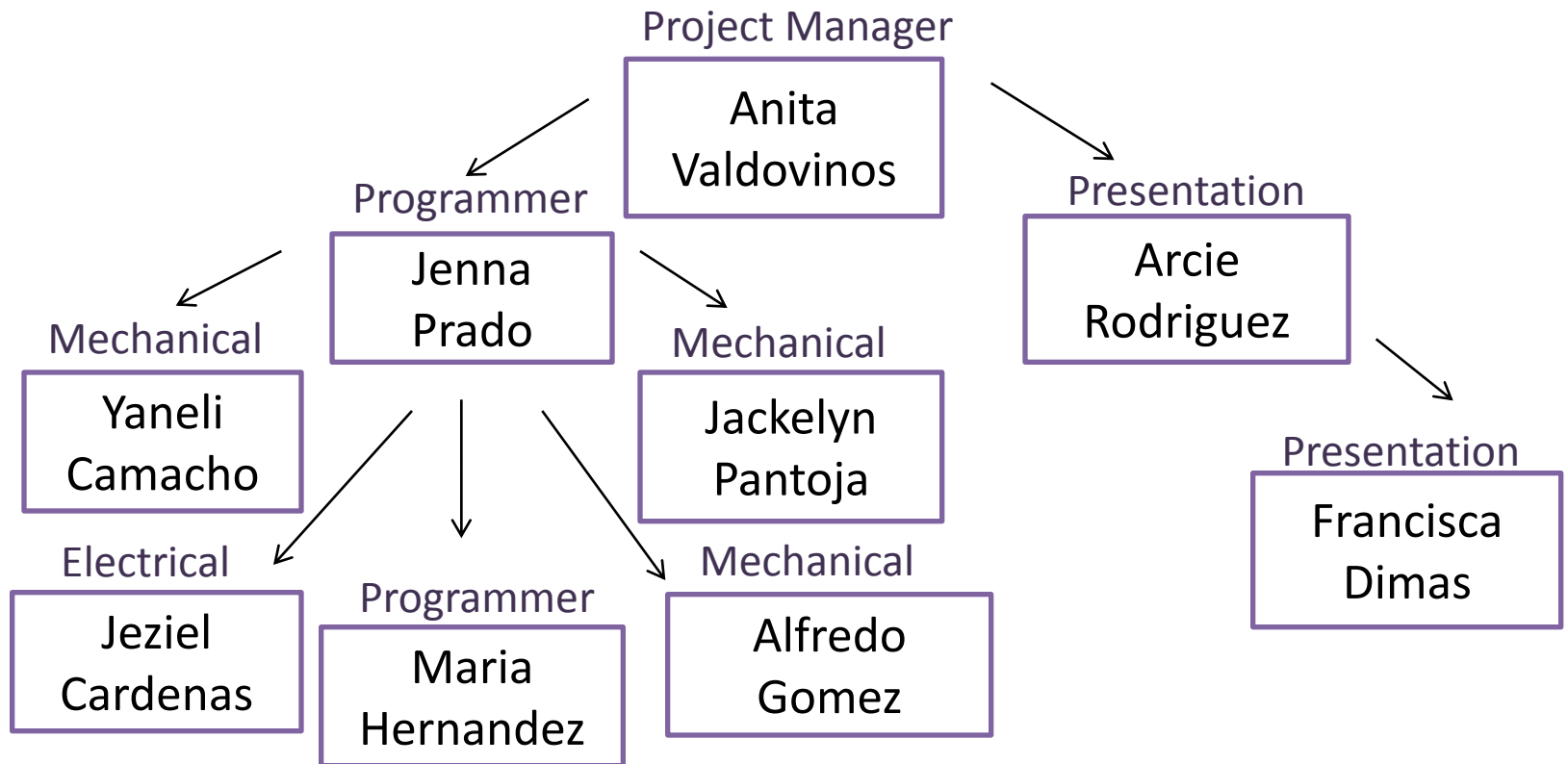
# INITIAL GOALS AND MOTIVATION

- “Keep It Simple Stupid” (KISS).
- Shoot for the Stars!
- Respect
- Collaboration
- Communicating
- Sharing Ideas



# PROJECT MANAGEMENT

- Everyone contributed to the end result evenly.



# PROBLEM STATEMENT

- Human responders put their lives at risk.
- Current situation:
  - Limited in budget
  - Short of ideal expectations
- How will our project improve the current situation?
  - Lost individuals
  - Send alarm where their located

3D SLIDE MAN - 5421



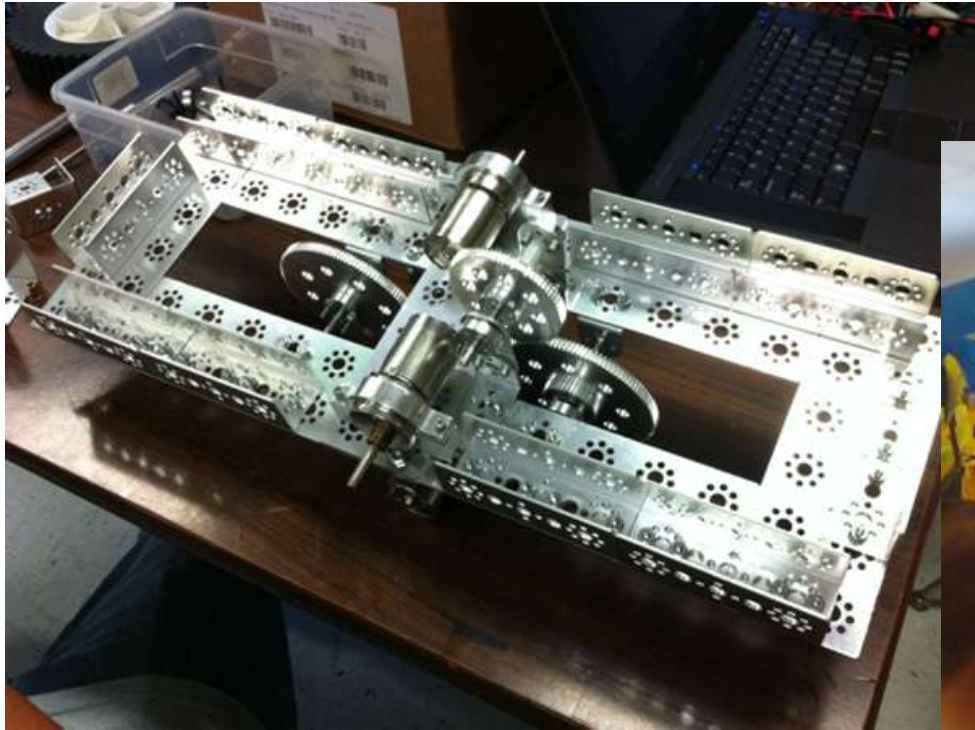
# PROTOTY



# ON OUR ROAD....

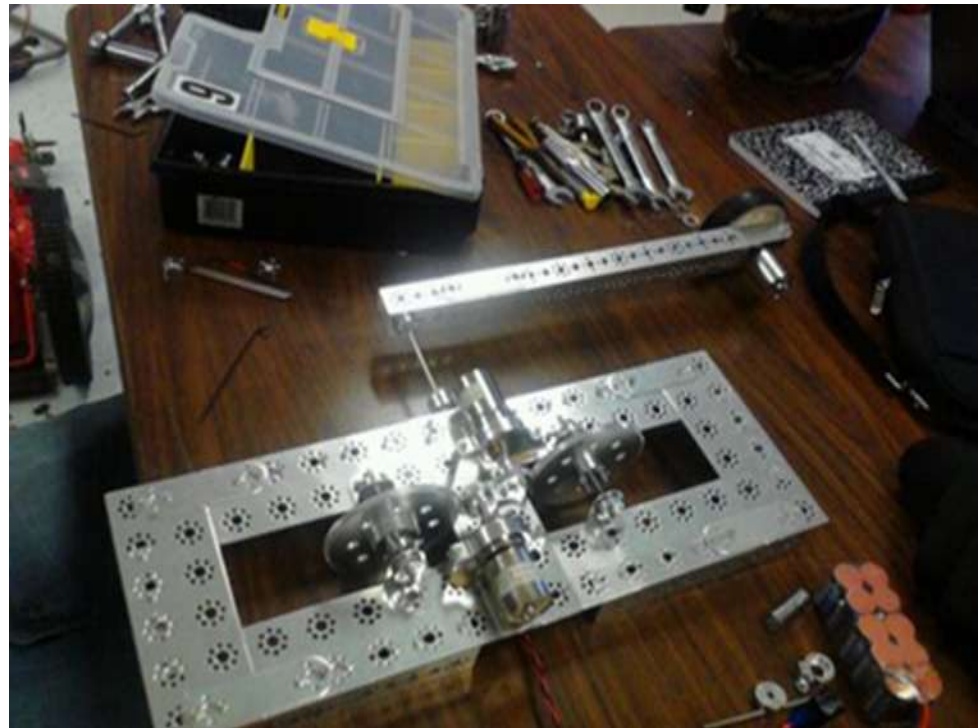


# ....TO DESTINY



# ROBOT

- Functions
  - Flexible arms, for easy transportation
  - Signal for rescue
  - Infrared Camera
  - Flip its own body



# MADE OUT OF:

- Fire Resistant Material
- Lego Tetrax and Mindstorms Parts
- Aluminum
- 4 8'' Wheels
- 2 6'' Wheels
- 6 DC Motors
- 1 Servo Motors



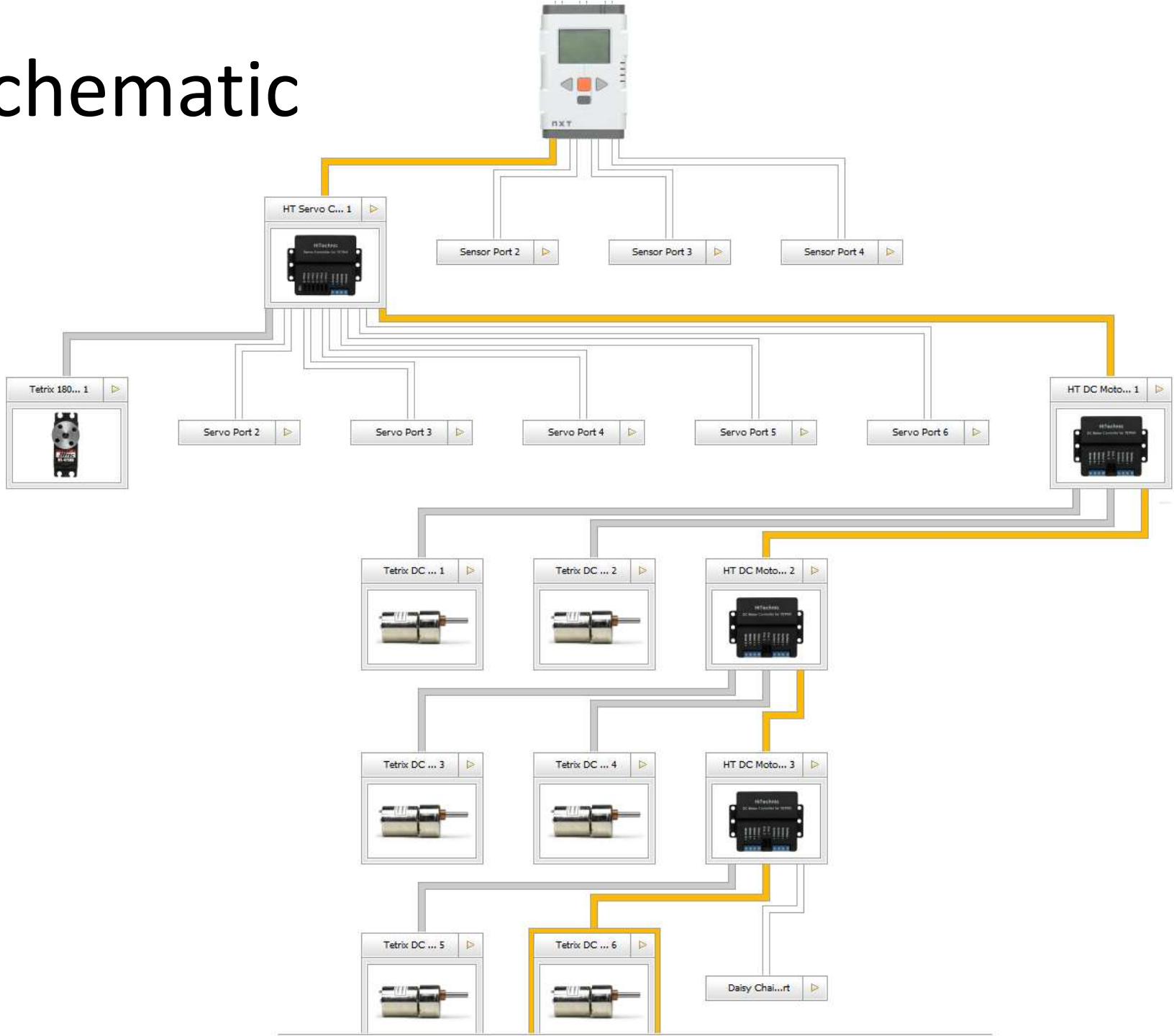
# TRIAL



# GEARS ON THE BODY

CAD

# schematic



# FUTURE RECOMMENDATIONS

- Better quality materials.
- Actual robot designers and engineers
- An equipped room & appropriate tools and space
- Higher budget



# THANK YOU

- Jack Dobbler (Travis County Emergency Management)
- Dr. Erika Lima (UT Psychology Department)
- Andrew Olsen (Skillpoint Alliance)
- Emanuel Strauss (Stanford University)



# RESOURCES

- [www.fema.gov](http://www.fema.gov)
- <http://www.marshmission.com/hurricanestatistics.htm>
- [www.democracynow.org](http://www.democracynow.org)
- [www.unisdr.org/disaster-statistics](http://www.unisdr.org/disaster-statistics)
- [http://www.adrc.asia/publications/databook/DB2006\\_e.html](http://www.adrc.asia/publications/databook/DB2006_e.html)
- <http://www.nws.noaa.gov/om/hazstats.shtml>

Project Manager



Presentation



Programmer



Presentation



Mechanical



Programmer



Mechanical



Mechanical



Electrical

