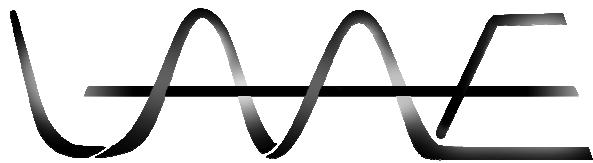


BUILDING A CLEANER, MORE  
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# Electric Pulse Going for Florida

By: Derek Ho

*LAAE prepares to travel 3000 miles to compete.*

Next year, the Los Altos Academy of Engineering plans to compete in the Emerald Coast Electrathon held in Pensacola, Florida. This plan is called Project Pulse. Project Pulse is the electric car that the team is currently constructing. LAAE has two primary goals for Project Pulse's performance in the Emerald Coast Electrathon. The first goal is to construct the car to run thirty miles in one hour. The second goal is to run as efficiently as possible by minimizing battery consumption.

LAAE previously competed in the Solar Electric 500 Electrathon at the Phoenix International Raceway in March 1993 and in the Pentad National Electrathon at the Cal State Dominguez Hills Velodrome in June 2000. As a result, electrical team leader Jeffrey Choi, declares, "We are going to improve. We are going to achieve better results than the teams of the 1993 and 2000 competitions. The technology we have is better than the technology that was had by the students of those two teams."

The car is designed to have three wheels, not only to meet the requirements of the competition, but also to lower the coefficient of rolling resistance. "In simple terms, the coefficient of rolling resistance is the fric-



*Infusion displayed at 2010-2011 Open House*

tion which prevents the wheels from moving. By decreasing this coefficient, the vehicle will be able to run faster as there is less friction to slow the vehicle down," design member Leon Liang explains.

"Now that all the materials have been gathered, our primary focus is to assemble the pieces and construct the Project Pulse vehicle," says mechanical member Tanner Owen. "We have made pretty good progress so far this year," design member, Darren Engbelieve. "The members of the team will continue to work at a strong pace. Of all the projects the Los Altos Academy of Engineering has worked on, this one is no different." Go Project Pulse!

# An End and a Beginning

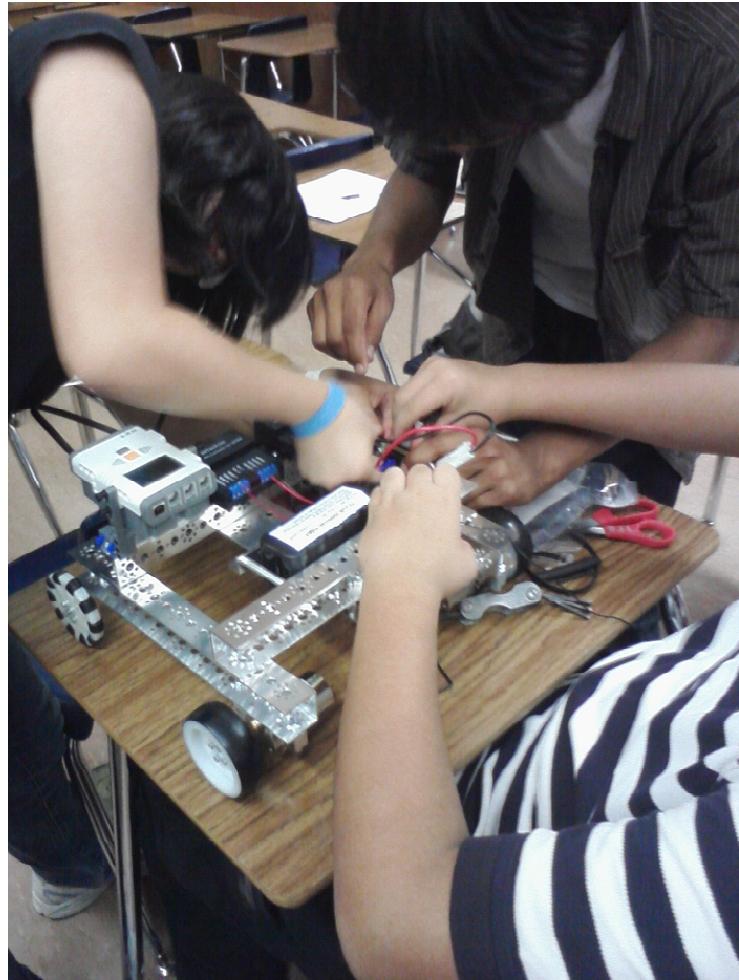
By: Derek Ho and Shirley Yañez

Project Zeus has ended. The Los Altos Academy of Engineering's five year project has been terminated due to time constraints and the loss of the Toyota Scion prototype. According to federal highway safety standards, prototypes are required to be destroyed within three years after their manufacture dates. As a result, Los Altos has returned the vehicle, ended the project, and taken the opportunity to look for other robotic competitions. The end of the project now allows the robotics team to participate in the First Tech Challenge. They have formed their team and are now working to win their way to the end.

LAAE plans to continue forward with the First Tech Challenge, a robotics competition that encourages students to combine engineering, technology, and science to extend their limits. This competition in October at Monrovia High School features two parts. The first part requires the robot to travel autonomously and follow a set of programming codes; the second part requires one of the team members to control the vehicle with a remote-controlled device. As two different teams are allied to compete against two other teams, the competition's main goal is to earn as many points as possible in the required amount of time by gathering select items and dropping them into certain containers.

Armed with their robots, the team is thrilled as this is their first time entering this competition. Team member Marcos Avila says, "This is a great way for young minds to understand robotics and express their creativity." "We don't expect first place," says team leader Nick Pung. "We will be competing with even more experienced teams." Nonetheless, the LAAE looks forward to a fair and triumphant competition.

*Robotics team  
wiring the robot*



# New Leaders and New Goals

By: Adam Norris

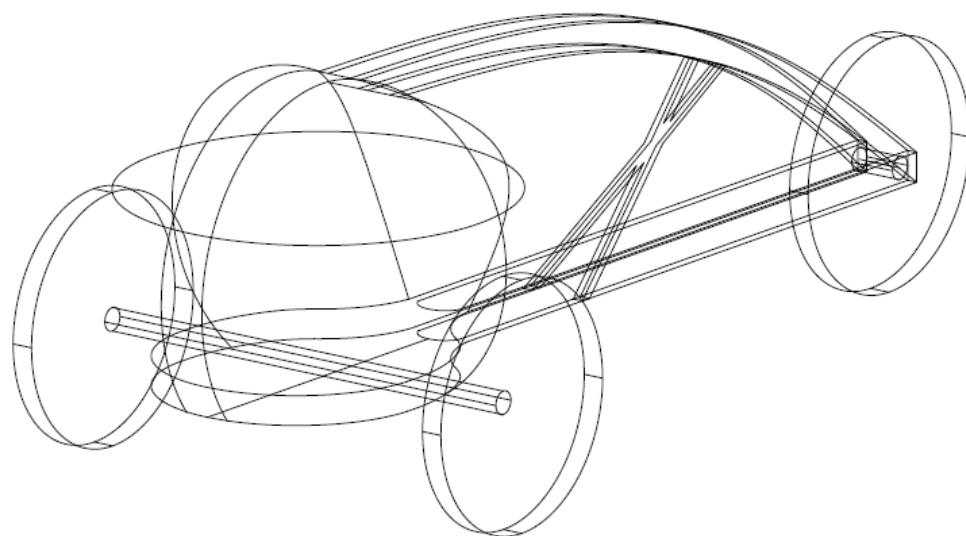
The Los Altos Academy of Engineering is expecting 2011- 2012 to be a productive year. With the graduation of last year's seniors and a new generation of underclassmen to fill their shoes, the LAAE is anticipating a long year of various projects including Project Pulse and the Pete Conrad Spirit of Innovation Challenge.

The Los Altos Academy of Engineering intends to continue the electric vehicle currently named Project Pulse. The vehicle will use lead-acid batteries to fuel itself as opposed to lithium-ion batteries because of safety issues that LAAE is not ready to deal with as yet. Its body will be made using composite materials wrapped around a steel tube frame chassis. "This will provide a wonderful opportunity to teach new members how to make a vehicle body using aerodynamic and efficient designs," says composites team leader Thomas Shaihor. "With the new, advanced designs, we hope to have Project Pulse run for 30 miles within an hour on a 24 volt system," says public relations team member Adam Norris. While this goal may seem difficult, design team member Jocelyn Liu comments, "If we all work hard together, we can be

successful in constructing Project Pulse. That goes for all of the projects," she remarks.

"When we set our sights on something and truly try to reach it, we can accomplish any of our goals."

Along with Project Pulse, the LAAE is



*Project Pulse concept car*

pushing to enter the Pete Conrad Spirit of Innovation Challenge. This competition centers on designing and presenting a hypothetical concept that can improve one of three fields: health and nutrition, clean energy, and aerospace exploration. For the student designed product, high school participants are required to create an abstract, business plan, technical report, and Next Step Plan before they compete in the final round at the NASA Ames Research Center. LAAE plans to enter three teams into the competition in order to experience the entire range of the competition. Teresa Chen, public relations team leader, has a goal of getting at least one of the teams into the final round for a second consecutive year. "With hard work and talent, I am confident that we will be able to achieve our goal," she states.

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## Los Altos Academy of Engineering 2011-2012



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THANK YOU TO EVERYONE THAT  
ATTENDED OUR 6TH ANNUAL  
OPEN HOUSE. WE HOPE TO SEE  
YOU AT THE NEXT OPEN HOUSE  
IN 2012.

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