

MARCH/APRIL 2014

# ROBODOX



With the FRC season at a close, the Robodox are ready to take on new, exciting challenges for the remainder of the year.

## The 'Dox Travel to Davis, CA

By Eileen Iniguez

With high spirits after having a great performance at the Inland Empire FRC Regional only two weeks prior, the Robodox traveled to Davis, CA to compete in the Sacramento FRC Regional. After a nearly 10 hour bus ride and a good night's sleep, the dox spent their first day getting to know other teams and preparing for the next day's completion by going to the practice field.

Every member of the team was engaged in activities from the moment they walked in the door to the UC Davis, whether it be working on The Anesthesiologist, scouting, running the Robot First Aid Station, or having their heads buried in another team's pit to get a robot up and running.

On the first day of qualification matches, the dox were forced to face the fact that they were up against some tough competition. The dox continued performing at their best, winning many matches and unfortunately losing to some deserving opponents. The dox played 12 qualification matches over two days and ranked 16<sup>th</sup> overall out of 55 teams in attendance. The dox were picked during alliance selection to continue into final rounds and after well fought matches ended their journey in semifinals, losing to the first seeded alliance.

Despite losing during semifinals, the dox did not come home empty handed, returning to Granada with the team's well deserved 12<sup>th</sup> Gracious Professionalism award.



Dox members Cesar, Kim, Alex, and Ziba sit in the pit, talking to judges about the team.



Dox drive team (Chris, Abhe, Vince, and Hosna) pose for a picture with their final alliance.

Photos courtesy of Eileen Iniguez and Abhenav Murthy

# The Algalita ROV Makes its 1<sup>st</sup> Debut

By Adhikara Buddyhartono

On the weekend of March 21<sup>st</sup>, four Robodox team members attended the Algalita Marine Institute's annual international youth summit with their mentor, Chris Siegert. The summit's intent was to educate and further the goals of school conservation teams across the world. The summit included multiple workshops, all related to better expressing and carrying out the particular goals and efforts of the teams attending.

Due to the Robodox's designation as a robotics team and not a conservation team or club, their presence was not as relevant as the other teams in regards to direct-action efforts to mitigate plastic pollution. However, the real reason the 'dox attended, was to demonstrate the open source ROV that they developed specifically for the Marine Institute's Primary research vessel, the Alguita, captained by Charles Moore. Although there were several minor issues with motor control, the dox were able to give a preliminary demonstration to the crew of the Alguita, including the research vessel's resident drone pilot, a Phantom 1 quadrotor, to survey plastic pollution on the surface as well as underwater, using the ROV the dox will be supplying to them shortly.

The ROV performed as expected, though the temporary removal of the vertical engine prevented altitude adjustment during the demonstrations. The dox successfully briefed the Alguita's crew on basic operations with the ROV and evaluated the kinds of conditions that the ROV might experience during its two month deployment on the research vessel. The dox team members proceeded to discuss possible uses for the ROV as well as integrating the control setup with the ship's existing drone control systems.

Mr. Siegert also suggested using the ship's onboard satellite uplink to allow control of the ROV over the internet, possibly giving students all over the world that might be following the Alguita's voyage a chance to control the ROV from their classrooms.

The Marine Institute provided an excellent location for the summit, with great food, housing, and even a guest performance by musician Jack Johnson.



Team members Kim Lai and Katie Munster with musician Jack Johnson.



The dox and mentor Chris Siegert sit down for a nice lunch provided by the Marine Institute.



Team members Katie, Kim, Shruti, and Adhikara gather for a photo at the end of their day.

Photos courtesy of Adhikara Buddyhartono

To follow Chris Siegert's blog: <http://vamfun.wordpress.com/2014/02/25/algalita-openrov-ready-for-testing>.

## 8 Week Working

By Eileen Iniguez

Even though the dox are done competing for the year, there's no slowing down yet. For the remainder of the year, the team will be working on smaller projects ranging from rebuilding the drive system on last year's FRC robot, The Medic, to learning software to building and completing a t-shirt cannon.

The team is hoping to expand its knowledge by taking on these diverse projects that will not only benefit the dox but also allow the team to reach out and help other teams struggling with certain concepts.

Each group has formulated a project plan including jobs for each member and a set of deadlines for milestones in the projects.

The projects have all been planned according to an 8 week time constraint, leading up to the end of the year.



Team member Sam prepares to test the t-shirt cannon.



Team member Michael helps the Balboa Explorers as part of Robodox VEX IQ outreach efforts.

# 'Dox Visit Delta Tau

By Alyssa Chiang

On Wednesday, April 23, the Robodox visited Delta Tau Data Systems, Inc. in Chatsworth. The company specializes especially in precision instruments, some of which were on display in a demonstration room the team had the much-appreciated opportunity to see. The presentation that preceded the tour informed the team about many new aspects of engineering more than a few steps above our current capabilities. The level of accuracy and engineering brilliance gave everyone a broader perspective on the world of science and technology that robotics is only an introduction to.

After the humbling presentation, our beloved mentor, Alex Anikstein, led the team on a tour through the building. Many of the machines, as we learned, were installed with Delta Tau's own parts. At the end, the Robodox had the chance to see some of the instruments in action. Among the abundance of gadgets were a machine that could shoot balls into a basket and an incredibly fast laser dog-tag maker. The experience was very educational and gave a more real-life outlook on where the future is headed.

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## Upcoming Events:

May 16<sup>th</sup>. 2014 - Robodox  
Banquet



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