The Sprocket:
A Robotics Geared Newsletter

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# Team Updates and Interview with President Kat!

If you didn't catch us last time, our team was given a challenge involving shooting frisbees through goals to earn points and climbing to the top of a pyramid. That challenge is called *Ultimate Ascent*, and during the several weeks since we were assigned this challenge, we believe we have devised a satisfying solution to *Ultimate Ascent.*

Our robot has improved throughout the weeks, but other challenges followed. This year the size limit of the robot has shrunk, meaning we had the challenge of making a smaller and more condensed robot than before. During our interview with her, President Kat said that teamwork has played an important and crucial role in building the robot. "You can look at the robot and see which part each person did and that's really cool" (President Kat). With new people coming in every year, we talked to some new robotics members, JJ and Ally, as well as our President, Kat Hammer, and asked them about how they felt Robotics was going this year. Currently, both JJ and Ally have found Robotics to be "very enjoyable" and really enjoy watching the robot drive around chasing team members; they also are enthused about returning to discover next year's challenge.

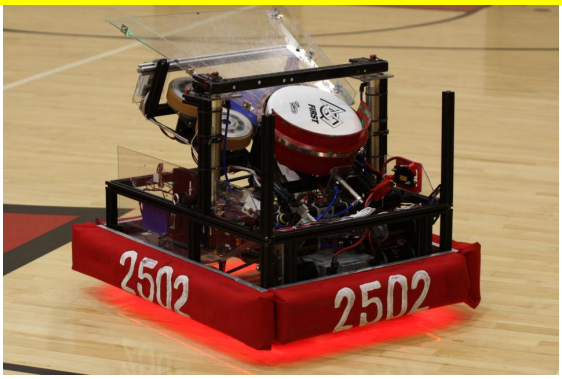



*Image courtesy of Team 2502 TalonRobotics*

Meanwhile, Kat told us that the shooters have been attached to the frames of both mobile robots, including the practice bot, and that she found the new space limitations to be one of the biggest challenges this year. She also comments about how Robotics "is an interesting environment, in that it is all ages and all different backgrounds and mostly boys. … It's important that we get to split up responsibilities because there is so much to do on the robot and so little time."

Since then, we've finished constructing both robots and we're practicing for our competition up at Duluth to occur March 7-9. Don't forget to cheer for us, read up more on our website, and if you like our work consider joining us next year!

# The Next Big Things On The Market

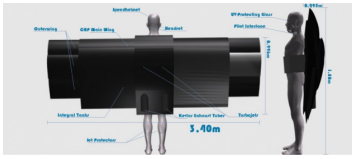
The Consumer Electronics Show isn't the only place to find new up-and-coming technological innovations—here are some other products expected to soon to be major hits!

*Image courtesy of forza-motorsport.net*

The Italian car company Pagani has introduced an ultra-light and super strong material for use on their Zonda R and Huayra supercars. Carbotanium is a combination of titanium and carbon fiber composite materials, but it's not just as easy as laying one over the other. The titanium and carbon composites are combined by first preparing the titanium to be bonded to the carbon fiber. The titanium is coated with platinum and aged at 950 degrees for eight hours, and afterwards a coat of paint primer is sprayed onto the titanium and an adhesive is applied to the primed side. Finally, the carbon fiber is attached to the titanium. This process allows the carbon composite to bond securely to the titanium. Carbotanium uses the best properties of each piece and has a better set of properties than either part alone. It is strong, light, and rigid. The process needed to create it makes it very expensive, and currently you can't even buy it. It is made only by Pagani, and only for their cars—nothing else. They won't sell the material raw. Still, carbotanium is one of the strongest, lightest, and coolest materials ever created, but until the cost of creating this revolutionary composite are lessened, don't expect to be driving around in a car made of the stuff anytime soon. Unless you have a few million to spend on one of Pagani's signature supercars.

A man has flown—Yves Rossy built a functioning jet-pack! It is a relatively small device but has the power to lift a man and fly him 78 mph at an altitude of 11,000 feet. It is about 350 pounds and 3.4 meters wide. The bottom side has 10 inch wheels for easy take off and landing. And here's the kicker: the wings of the prototype are made of *plywood and shrink wrap*. Hopefully the final Skyflash will be made of glass fiber. It is steered using a wrist mounted display screen and fire proof boots along with the momentum of the pilots body. This technology opens the gateway to a whole new world of transportation for average humans.

*Image courtesy of dvice.com*



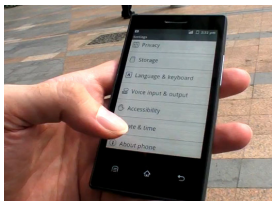


*Image courtesy of technologyreview.com*

A new twist in the world of smartphones was recently revealed. An android phone made by a company named E Ink has made an "E Ink" smartphone. For those unfamiliar with the technology, E Ink is the type of screen used in popular e-readers such as the Kindle and Nook. E Ink has some downfalls such as being entirely black and white and slow. But it also has upsides such as being easily read in bright light and uses little power. Needing little energy to power is a huge benefit as the largest battery consumer on a phone is the display. The E Ink is very cheap, about $50, and extremely light at 80 grams. This revolution in phone technology allows for cheaper and simpler smart phones.

1. Come support us at the competition in Williams Arena at the University of Minnesota from March 28 to March 30!
2. Make a donation! Send an email to mail@team2502.com and we'll get back to you with more details for support.
3. The best way to support us is to join Team 2502! Look for us at the Activities Rush next year and sign up!

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