

# The Sprocket:

A Robotics Geared Newsletter



www.team2502.com

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## **Team 2502 Begins Fifth Season with "Rebound Rumble"**

On January 7, 2012, robotics teams all across the nation geared up for the FIRST robotics kick-off! The challenge this year is called Rebound Rumble and is based off of basketball. It will take place on a 27x54 feet field with a central barrier setup. The goal is to shoot foam basketballs into baskets. There are four baskets that can be aimed at; the higher the basket, the more points our team will receive. There are two Alliances of three robots each on the court for a match. Each robot can choose from a see-saw or a 4x6 inch barrier to cross the middle.

There are three types of matches in the competition. Practice Matches let teams get used to the field. Qualification Matches allow teams to score points, which allow for seeding into the Elimination Matches. In the Elimination Matches, alliances need to win the match in order to advance to the next round. All matches begin with a 15-second Hybrid Period where one robot on each Alliance may be controlled with a Microsoft Kinect system. Baskets scored in this time are worth three extra points. The other 2 minutes of the match are the main part of the match, when teams can drive their robot. At the end of the match, robots can attempt to balance on the bridges in the middle of the field to score additional points. 1 robot balanced scores 10 points, 2 robots balanced scores 20 points, and



*Image courtesy of us.first.org*

3 robots balanced scores 20 points in the Qualification matches and 40 points in the Elimination matches.

Our team is currently building prototypes for our main ideas. We are still deciding on a launching device - either a tennis-ball shooter design to push the balls through a set of spinning wheels, or a baseball launcher design by quickly spinning a big wheel to launch the balls. Our robot moves on carpet wheels, which help the robot to stably move faster on the field's carpet. The main frame of our robot is built with 80/20 aluminum bars, which keeps the robot lightweight but strong. These 80/20 bars also connects with itself more easily than other metal bars do.



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# New Technology from the CES

New technologies for 2012 were unveiled at the International Consumer Electronics Show (CES), ranging from cell phone applications to 3D television and even the new PlayStation Vita!



*Image courtesy of thetechlabs.com*

Many people at the CES got the opportunity to try out PlayStation's new portable PlayStation Vita. As the successor to the PlayStation Portable, this new handheld gaming

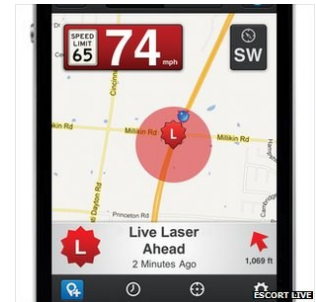
device sports dual analog sticks, a touchscreen on the front, a touchpad on the back, front-facing and rear-facing cameras, a quad-core processor, and graphics that rival that of the PlayStation 3. Other features included are 3G, Wi-Fi connectivity, and GPS support. The PlayStation Vita is set to rival Nintendo's latest handheld console, the Nintendo 3DS. The PlayStation Vita will be released in the United States on February 22, 2012.

## How Can I Support Team 2502?

1. Come support us at our competition in Williams Arena at the University of Minnesota from March 29 to March 31.
2. Make a donation! Send an email to [mail@team2502.com](mailto:mail@team2502.com) and we'll get back to you with details.
3. The best way to support us is to join Team 2502! Look for us at the Activities Rush next year and sign up!

Some cell phone apps were introduced at the CES, including a Speed-Trap alert app. Escort Live presented their Speed-Trap alert app, which communicates via Bluetooth with Escort's detectors to record speed trap areas. These alerts are transferred to the In-

ternet, where subscribers are warned of potential speeding fine zones.



*Image courtesy of bbc.co.uk*



*Image courtesy of sony.com*

Ever wanted to experience 3D television with an even more personal experience? Sony has the thing for you! At the CES, Sony

demonstrated its personal video viewer. Described as a lightweight device that can deliver "unparalleled home entertainment in an immersive environment," the viewer gives an experience of a 750-inch high-definition 3D theater with 5.1 surround sound. This device is available for \$800 in Sony's online store.

## Credits

### Editor-in-Chief

Jesse Loi

### Editor

Yitz Deng

### Robotics Article

Vijay Shah

Ali Dietz

Ashley Auerbach

Cassidy Lee

### Technology Article

Duy Nguyen

Vijay Shah

Adarsh Ravishankar