Technology aims for perfect jump shot, golf swing (Update)

January 10 2014, by Rob Lever

Liquid Image's googles with built in cameras on display during the first press event 'CES Unveiled' at the Mandalay Bay Convention Center prior to the 2014 International Consumer Electronics Show in Las Vegas, Nevada on January 05, 2014

A connected basketball promises to improve your jump shot. Embedded sensors which gather and analyze data offer hope for a better swing in golf, baseball or tennis.

The worlds of sports and technology came together this week at the Consumer Electronics Show, highlighting ways science can improve performance for the weekend warrior or professional athlete.

Apps and sensors showcased at CES 2014 help runners, cyclists, skiers, and people who play tennis, golf or baseball and more.

The 94Fifty basketball from Ohio-based startup InfoMotion Sports Technologies has sensors connected to a smartphone app, which analyzes shooting and other aspects of the game, with the goal of getting users to shoot with the optimal trajectory.

"The ideal trajectory is 45 degrees, coming down into the basket," said Dave Calloway, a former collegiate basketball coach who is sales director for the company.

But Calloway acknowledges some players might find success with a different technique.

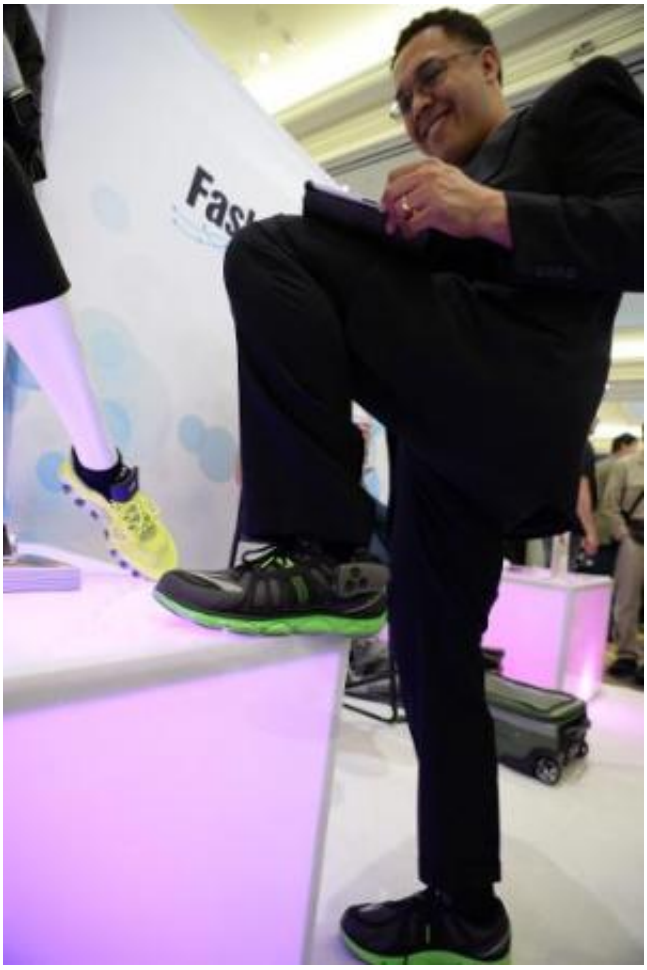
"We tell you the ideal way, but we also allow you to do what you need to do to feel comfortable," he told AFP on the CES floor.

"For most players, their biggest flaw is inconsistency in trajectory. We as coaches can tell them what they have to do but with this system it is reinforced. They get the muscle memory."

Calloway said the basketball is being sold for recreational use, but that it could be beneficial at all levels, noting that it is in use by teams at Princeton University and the University of Kansas.

The same technology, he said, is likely to be applied by the company to a soccer ball in the near future.

Another basketball system was introduced by British-based Cambridge Consultants, but its engineers were hesitant to offer a specific figure for trajectory.



Boogio co-founder and CEO Jose Torres wears the Boogio pressure sensor insole at the 2014 International CES, January 9, 2014 in Las Vegas, Nevada

"It depends where you are on the floor," said Cambridge's Duncan Smith.

The engineering and consulting firm developed the system using sensors

in the backboard communicating to a smartphone. It is a prototype and "we hope someone will take it to market."

California-based startup Zepp Labs meanwhile introduced three products, which analyze swing speed and angles for tennis racquets, baseball bats and golf clubs.

These systems also connect to smartphones to develop the optimal techniques, giving users feedback to improve, analyzing backswing, tempo and posture.

Babolat, the French company founded in 1875 and credited with inventing racquet strings, showed its connected tennis racquet and app, endorsed by champion Rafael Nadal.

"When you play tennis, you have your own sensation but you don't have data on power or where the ball hits," said Thomas Otton, communications director for Babolat, which launched its Play Pure Drive racquet in the US in December and will release it worldwide later this year.

"There is also a gamification aspect to this. With the app, you can compare your performance to that of your friends, even to Rafael Nadal."

Other connected racquet systems—including one from Sony shown at CES—use a sensor which attaches to an existing racquet, but Babolat, which has partnered with the French technology firm Movea, has built it into the base of the racquet itself, so it does not affect weight or feel, says Otton.

Otton said the company has worked to effect a rule change by the International Tennis Federation to allow these racquets to be used in

tournaments, which can allow data to be analyzed after a match.

Also at CES were ski goggles from California-based Liquid Image include a high-definition camera which can to connect to a smartphone and record data for later analysis.

Pioneer, the Japanese electronics firm known for its audio equipment, displayed its connected bicycle—formally known as the Pedaling Monitor/Power Meter Sensor and SGX-CA900 Cyclocomputer.

With a wireless transmitter and a display on the handlebars, the bike provides real-time pedaling power measurements and analysis, including stroke efficiency and torque.

This provides "continuous and instantaneous performance feedback," according to a company statement.

CES was awash with apps and sensors for runners, with sensors which measure speed, posture and stride.

Reflx Labs meanwhile uses data from a shoe insole sensor to transmit data on heel and arch pressure and balance, and also has an app for Google Glass which can allow runners to make changes in real time.

"You can see exactly what is happening with your feet," said co-founder and chief executive Jose Torres.

The system called Boogio can be used for recreational runners, "but we can also see it used for Olympic training," Torres said.

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