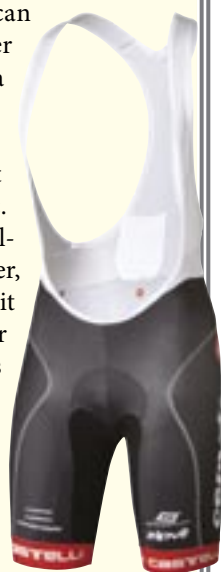


# Tech Briefs

## Aero Race Kit Saves Riders 12 Watts of Power

PORTLAND, OR—Castelli claims its Aero Race Team Jersey can save a rider 12 watts of power at 25 mph. Cervelo riders are eager to put that claim to the test. “It’s as significant as switching to a high-end wheelset and as noticeable,” said Steve Smith, global brand manager at Castelli. The high-end apparel brand had been working on development of the jersey and Aero Race bib short for a year. Castelli found the fit to be as significant as the fabric. The jersey alone went through 20 pattern changes. “It doesn’t really matter what your fabric is—if it flaps or bunches up on the rider, everything the fabric gains is lost,” Smith said. Castelli’s Aero kit has surface dimples to break up the first three millimeters of air that flows over the jersey. Its thin, super-stretchy fabric sticks as tight as skin. A large Aero Race jersey looks like a small in traditional sizing. In addition to panels of the dimpled fabric, Aero Race bibs are stitched to provide as little compression as possible to encourage capillary blood flow in glutes, quads and hams. “Reducing fabric compression in our shorts is the opposite of many other short designs. But a lot of the burn a rider feels in their legs or glutes is do to fabric compressing capillaries so the blood cannot flush through,” Smith said. Castelli delivered the Aero Race kit to dealers last month.



Aero Race bibs

## Laser Allows Cyclists to Create Lighted Lane

SOMERVILLE, MA—Originally an entry to a design competition, LightLane is taking on a life of its own. Alex Tee and Evan Gant developed the laser-generated bike lane. “It’s been truly remarkable to see the excitement that this concept has generated, especially considering it was just a fun, quirky idea to begin with,” Tee said. Tee, a mechanical engineer, and Gant, an industrial designer, noticed their comfort as riders increased whenever they rode within a marked bike lane. But bike lanes are not everywhere. So they developed a laser system that draws a bike lane around them, including bold striping between them and traffic, and a small bike lane logo right behind the rear wheel. Because the laser generates the striping on the move, a cyclist takes their bike lane with them. “Currently we are building a beta prototype where we will be experimenting with different laser colors and orientations. Once the optimal laser configuration has been established and validated, we will quickly develop a fully functional unit where we will focus on several aspects of usability including theft prevention, cleanability and corrosion resistance,” Tee said. The team is looking for manufacturing and distribution partners. Tee can be reached at (617) 623-7600, ext. 225.

## iPhone Apps Make Bike Tuning, Setup a Cinch

REDWOOD CITY, CA—When Francis Cebedo has a bike tuned right where he likes it, he pulls out his iPhone with its 99 cent Inclinometer application to record



Inclinometer application on iPhone or iPod touch screen

head and seat tube angles. “It’s so quick and accurate, I can set up new bikes quickly or dial in just the right amount of suspension sag with my iPhone,” said Cebedo, founder and general manager of Mtbr.com and Consumerreview.com. “It’s surprising how much a tire switch can change frame angles and impact the handling of a bike.” Cebedo also uses Bicycle Gear Calculator, an application that calculates all sorts of gear setups from chainring, cog and tire information. It even includes crank length. Cebedo is considering adding Here-I-Am, an application that lets him send his GPS location to someone in case something serious happens when on a ride. While shop mechanics may be hard pressed to get the boss to splurge on a \$200 bike frame angle finder and gear-range calculator, the Here-I-Am function may help them cinch the deal.