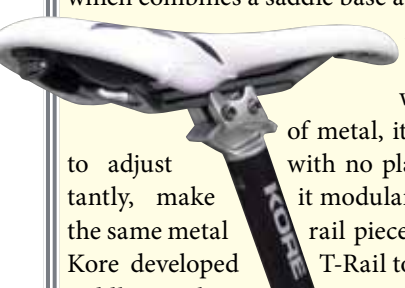
Tech Briefs

I-Shifter Operates Front and Rear Derailleurs

SURREY, British Columbia—Developed over the last 15 years, the i-shifter will debut at Interbike this month. The single-twist shifter operates front and rear derailleurs simultaneously to eliminate large changes in gear ratios and undesirable cross-chain conditions. "All a cyclist needs to do is twist a single handgrip in one direction to shift to a lower gear and in the opposite direction to shift to a higher gear," said Ross Mitchell, founder of Sunomi, which produces the i-shifter. French company EGS Syncro Shift developed a similar shifter in the late '90s but it was bulky, which hindered its use with standard brake levers. After Shimano purchased EGS, the shifter disappeared. I-Shifter is much smaller than a normal SRAM twist shifter but a bit longer. Mitchell machines cam slots into the handlebar itself that control the shifting, so he's initially targeting OEMs with a handlebar and shifter system priced at Acera levels. "Problems when shifting gears is one of the most frequent complaints consumers identify when asked to evaluate the riding experience. But I think even for elite athletes, my shifter provides an advantage," Mitchell said.

T-Rail System Increases Saddle Adjustability



SEATTLE, WA—Kore was an early adopter of SDG's I-Beam saddle design, which combines a saddle base and a single central rail into one piece. "I love the I-Beam to seatpost interface—it's a simple direct tilt and tighten assembly with no fumbling around with rails. I thought if the I-Beam was made out of metal, it could be made more impact resistant and easier to adjust with no plastic indentations from the clamps. More importantly, make it modular so that different saddle shells could be used with the same metal rail piece," said Lance Bohlen, Kore's general manager. So Kore developed T-Rail to replace the conventional tubular rails of a bicycle saddle with a strong, inverted T-shaped forged-aluminum rail that is compatible with I-Beam seatposts. The T-Rail system offers 60 millimeters of fore-aft adjustment—almost double that of a conventional rail saddle. "It could be possible to replace the tubular metal rails of any make or model saddle with a forged-alloy T-Rail piece, making the saddle lighter, much stronger and more adjustable," Bohlen said. The patent-pending design uses 6061-T6 aluminum alloy, but lighter materials like magnesium could be used.

Wheel Usage Prompts Need for Precise Truing

BODFISH, CA—The abuse riders subject their wheels to today and their desire for lighter wheels calls for a new level of wheel building, according to tool maker Paul Morningstar. "Eyeballing clearance is no longer good enough. It has gotten to the point that you need to build to within eight-thousandths of an inch to assure a strong and true wheel out of lightweight components," said Morningstar, owner of Morningstar Tools. Morningstar designed a truing stand that uses two dial gauges to adjust hop and wobble at the same time. The use of gauges also means the rim can be centered without a centering gauge. "A builder can read every spoke's influence on wobble or hop because the gauge reads that closely," Morningstar said. Made from extruded aluminum, the GNU Standard stand is portable and lightweight, he added. The truing stand with two gauges and adapters for 15- and 20-millimeter through-axles sells for $250. GNU's wobble gauge slides vertically to quickly check wobble on disc rotors while truing a wheel.