Two startups in high-tech bike race

Upstarts aiming to reinvent cycling produce remarkably similar battery-backed, smartphone-enabled wheels

By Michael B. Farrell | GLOBE STAFF | DECEMBER 16, 2013

One big question for the two startups isn’t who came up with the idea for the wheel, but whether anyone is going to buy it. The FlyKly (above) is $590.

So who really reinvented this bicycle wheel?

Two startups unveiled high-tech bicycle wheels within weeks of each other in October that both said would revolutionize cycling.

As for their specialized, battery-backed wheels, well, they look oddly similar. Both have a striking number of same features, too. And both upstarts profess to use groundbreaking technology that can turn most any standard bike into a hybrid e-bike controlled with the touch of a smartphone.

A moment of cycling serendipity? Or is there something amiss here?
Those questions have been cropping up with increasing frequency on Facebook pages and on cycling blogs around the world as these two startups — one in Cambridge, the other in New York — race to become the first to market with sleek, motorized wheels that provide a burst of power to get riders through tough slogs.

It’s a two-wheel battle of the startups, and each is competing for the attention of the smartphone-toting urban cyclist.

The local contender, Superpedestrian Inc., grew out of the Massachusetts Institute of Technology’s SENSEable City Lab and plans to begin shipping its Copenhagen Wheel this spring. The company’s founder, Assaf Biderman, is associate director of that MIT lab and has been working openly on the design of the electric wheel since about 2009.

Then there’s Niko Klansek, founder of FlyKly Inc., a company that previously sold fully electric-powered bikes. An entrepreneur from Slovenia who resides in New York City, Klansek debuted his company’s Smart Wheel on the crowdfunding site Kickstarter in October and raised $701,239 to fund its production.

Neither wheel is on the market or in bike shops yet, but both companies are accepting online pre-orders before the products become available next year.

The promise that Biderman and Klansek are both selling is pretty much the same. The rear wheels attach to most standard bicycle frames and come equipped with batteries and a small motor — all enclosed in a disc — that kick in to assist cyclists when they need help the most, such as going up hills.

Much like a hybrid car, the wheels can capture and store energy when a cyclist is flying down a hill.

The wheels also have a wireless connection to smartphones apps that lets riders track their routes or lock and unlock their bikes.

Sounds kind of the same, right?

That’s what Biderman thought when he heard about the FlyKly Kickstarter.

“When I saw that thing, I was like, that looks awfully similar to the Copenhagen Wheel,” Biderman said. “It’s hard for me to say if he’s infringing on our patents because I haven’t seen the inside of it. From the outside, it looks extremely similar.’

( Patents, filed by MIT and licensed to Superpedestrian, are pending. )

Biderman has his suspicions about FlyKly because Klansek came to MIT SENSEable City Lab last year and m...
“Afterward, he disappeared, and we later found out about the Kickstarter campaign,” Biderman said.

The technology inside the Copenhagen Wheel has been under development for four years, and Biderman does not believe it can be easily copied. Copying the idea, he said, is another matter altogether.

“I can tell you with certainty that this person came to us, and he was inspired by the wheel,” Biderman said.

That’s not the case, Klansek said in a telephone interview from Slovenia, where he is working on his project.

Yes, he did go to MIT, but not to snoop around, nor did he swipe their ideas.

“The idea to have a motor, battery, and electronics inside the rear wheel is old,” said Klansek, who has been involved in related bike technology for several years. But technology has advanced so much that riders can control lighter electric wheels with smartphones, he said.

Klansek said he has been working on the Smart Wheel concept over the past few years, looking for an easy solution for turning regular bikes into e-bikes. He was aware that MIT’s wheel debuted at the Copenhagen Conference on Climate Change in 2009 and has since been the subject of numerous high-profile articles and blogs. The wheel was even featured on an episode of Showtime’s “Weeds” in 2011.

Klansek said he figured the Copenhagen was a prototype that was stuck in the lab and wouldn’t make it to market, which he said was reinforced by his trip to Cambridge.

“I got the feeling that there was nothing going forward, so I thought they had forgotten about this project,” Klansek said.

While many similarities exist between the Copenhagen Wheel and the Smart Wheel, there are technical differences. For instance, the FlyKly wheel is lighter; the Copenhagen Wheel uses more powerful batteries.

So far, this debate hasn’t moved from the Web to the courtroom. And it’s possible it never will, said Dave Hurst, an analyst at Navigant Research who follows the e-bike market. “I doubt there will be many suits that follow just because no one has any money here.”

What’s more, Hurst said, other bicycle companies have also come out with similar wheels that enclose motors and batteries inside discs.

The real question for these two startups isn’t who came up with the idea for the wheel, but whether anyone is going to buy it. The FlyKly is $590, and Superpedestrian’s wheel costs $699.

“Your average hipster that’s using a single-speed bike to commute to work — I have a hard time seeing them being convinced to spend $700 for one of these,” he said.

“Even if it takes off, clearly these aren’t going to be huge sellers.”