

Technology Mash-Up

The Mind Melds with Gears for Cycle Project

Engineers love engineering.

They love mashing together a variety of tools, instruments and technologies to take a project in an entirely new direction. This was certainly the case when Patrick Miller, senior creative engineer at DeepLocal (Pittsburg, Pennsylvania) worked with Parlee Cycles (Boston, Massachusetts) Saatchi & Saatchi (New York, New York) and Toyota on what can only be described as a prototype bike for the science fiction/techno geek crowd.

The project began with a fairly straightforward question.

“What if we had a Prius-inspired bicycle that offered some of the crazy hybrid technology of the car?” Miller said. “From there we started discussing different ideas such as shifting experimentation; what if we did a brain-shifting bike?”

The Prius X Parlee offers a series of technological advances including a mounted iPhone that monitors the rider’s heart rate, speed and cadence. But it’s most incredible feature is a neuroheadset that essentially allows the cyclist to shift gears up and down by transmitting brainwaves to the bike.

According to Miller, the headset detects certain signals and sends these signals to a computer that translates them into “shift up and shift down” commands. Though it sounds simple enough, the rider actually has to “think” a certain way to get the gears to shift. Thankfully, the iPhone app comes equipped with an



override mechanism that allows you to change gears manually if your mind doesn’t cooperate.

“We took several technologies that were already out on the market and combined them with some of the bike innovations created at Parlee Cycles,” Miller adds.

The Prius X Parlee was demonstrated earlier this year at the 2012 SouthbySouthwest show in Austin, Texas. It was up to Miller himself, a University of Pittsburgh grad, to demonstrate its various features in front of a large group of attendees and reporters.

“I was pretty nervous about the initial presentation,” Miller says. “I wasn’t sure if I was going to be able to focus on the gear shifting, so I turned the bike around and faced the other direction so no one was looking at me. Fortunately, it worked and it’s been getting a lot of attention ever since.”

Today, the Prius X Parlee is touring the globe with some other Toyota products. These demonstrations give people the opportunity to ask the simplest engineering question there is, “What if?”

It’s the “what ifs” that got Miller excited about the project in the first place—a project that started back in 2011. Miller is now working on a packaging project for a soft drink company, some technological wizardry for a laptop computer and some new innovations for a shoe company.

Would he be opposed to taking another crack at the Prius X Parlee in the future?

“I’d have to dig out the original helmet,” Miller says. “I don’t know where it is anymore. This was really just about a bunch of engineers sitting around discussing how we could make a bike more interesting. I think the best part about engineering is taking a technology and improving upon it.”

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