

Luminate startup's focus is motorcycle safety

By GINO FANELLI

Picture yourself tearing down a highway on a Harley Davidson. You're going fast, but you're not quite sure how fast, so a simple downward glance confirms your speed is 60 miles per hour.

Say it takes one second to check the speedometer—that's a second with your eyes off the road, and at 60 miles per hour, that equals 88 feet traveling blind. A lot can happen in 88 feet, especially on a motorcycle. An unseen branch in the road, a pothole, or a quick-breaking vehicle to the front might mean minor damage in a car but could be fatal on two wheels.

Serial entrepreneur Kal Gwalani of Mango Teq, a competitor in the second Luminate NY business accelerator, has a solution; REYEDR, pronounced "rider," a detachable, holographic heads up display easily fitted to the visor of most any full-face helmet. The little module is adaptable to the rider's preferences, displaying anything from speed to navigation, distance or caller ID, all connected to the rider's smartphone via the REYEDR app.

"A car is much easier because the dashboard is higher—you don't have to look away from it, but a motorcycle you really need to be looking at the road, looking out for hazards, because if you're distracted, it could be fatal," Gwalani said.

As a motorcyclist himself, it's a critical problem that Gwalani is intimately familiar with, and filling that problem technologically is just a small piece of getting it to widespread adoption. Gwalani is also familiar with motorcyclists, and they can be picky. If he was going to create a product like REYEDR, it couldn't be an overly expensive helmet that, like any other helmet, needs to be replaced every few years. Riders have their preferred brands of equipment, and REYEDR needed to be an adaptable, retrofit device. It also needed to be affordable, something that the average motorcyclist could easily pick up.

"We estimate this will be about \$575 plus taxes," Gwalani said. "There are advantages to having it as a retrofit rather than incorporating the whole helmet. We do have the technology for that, but the

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cost is prohibitive. We're talking in the area of \$1,500, and there are issues with that. A helmet has a shelf-life of about three to five years for safety reasons. You could imagine this would be a barrier for people to buy a \$1,500 helmet every three years."

As flexible as it is vis-à-vis the type of helmet, REYEDR is also flexible in terms of a rider's preferences. Someone looking for just the basics can opt to display only critical information, while more digital-savvy riders can add other tools, information and device integration, all of which are updated through the mobile app.

"Essentially what's going to happen in future updates is that there will be connectivity with the motorcycle, so you can pick and choose if you want RPM settings to be shown, ABS traction, gear level indicator," Gwalani said. "But the information can become too much, so we plan to have

it in multiple screens, so you can swipe the screen you want depending on what app you want. We have three or four screens on there that you can set with your voice. It can be Home Screen, Sport, or it could be Touring because you want navigation, or a Communication screen if you're planning on calls coming through."

REYEDR is the first product to come from Mango Teq, which is based in Auckland, New Zealand. The Luminate NY accelerator has brought Gwalani around the world to a city he'd never heard of before. Now, about a month into the accelerator, REYEDR is looking to establish some contract manufacturing in the Rochester area as REYEDR moves closer to production, following up on a search for partnerships in Silicon Valley.

"Luminate connected with us in August, and I was pleasantly surprised when I got on a call with (Nextcorps client engagement manager) Andy Simon (to hear) that Luminate developed an ecosystem for companies in optical development. There's no other accelerator for that in the world, at all," Gwalani said. "We came here in November and we found that whatever benefits we were expecting in terms of setting up a company, this would be really suitable. We're really happy to be here, especially because it came out of left field, or I should say, right field, since we're on the East Coast."

Luminate NY is an optics, imaging and photonics business accelerator based at the Nextcorps office in Rochester's Sibley Building. The accelerator is funded through \$10 million of the Finger Lakes Forward Upstate Revitalization Initiative and provides 10 companies with \$100,000 in follow-on funding as well as a six month residency at Nextcorps with access to resources, mentoring and seminars. In June, the companies will compete for an additional \$1 million in follow-on funding.

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