Student designs sound technology venture

By Heidi Fischer

Mike Munroe has been told that he has all the hallmarks of a born engineer. In his spare time, when he isn’t busy completing assignments for classes in subjects such as turbulence and fluid dynamics, the 31-year-old mechanical engineering major voluntarily tackles a whole host of other technical challenges.

For example, after participating twice in the grueling cross-continental solar-powered car race known as the North American Solar Challenge, Munroe started a project to resolve some of the engineering bugs in solar-powered automobiles. That’s just one of many brain teasers he’s puzzling over.

“I put a little water in lots of different pots and see which ones grow,” he says, laughing. A project that Munroe hopes will bear fruit is a new audio device that he and his teammates are developing in this year’s InnovationSpace program. Charged with creating a product concept that will enhance the independence of elders in their home environments, Munroe’s team of design, engineering and business students focused on devising a new kind of hearing aid. Adapting iPod technology with a surprising new twist, Munroe plans to have a working prototype that listeners can take on a test drive at the final exhibition of InnovationSpace projects in May.

People with hearing loss, Munroe points out, lose it in increments, or windows, between one spectrum and another. Using psycho-acoustic filtering technology, the kind that’s used to pack lots of data into miniature mp3 players, Munroe hopes to create a device that can perfectly match sound to the user’s remaining hearing spectrum. The device will have added appeal to audiophiles like Munroe who will be able to hear a violinist drag a bow across the strings of an instrument with startling clarity. Munroe is as much admired by his teammates for his imaginative engineering as he is for his enthusiastic embrace of technology’s potential to solve real-world problems.

“I was thinking this morning, what is the key to being great wherever you are?” he says. “I thought, maybe it’s talent or ability. Maybe it’s raw mental horsepower. But it’s not. It’s passion. I made a covenant with myself that, as far as I could, I would only do things with my whole heart and try not to do anything with less than that.”

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