Sculptor Duane McDiarmid has long been interested in exploring the influence of technology on humanity. Technology is often associated with the decline of direct human interaction and civility (think cell phones). With a recent art installation, The Trickster Project, McDiarmid turned that notion on its head. And he did it with the help of students from the Russ College of Engineering.

Trickster is a movable, thousand-pound, sailboat-sized sculpture on wheels, red flags shooting up on masts. McDiarmid, an associate professor of sculpture at Ohio University, has installed the artwork in deserts throughout the American West. To up the ante, Trickster carries a solar-powered freezer filled with ice cream. If anything will start a conversation among strangers, it’s the head-scratcher that is Trickster. “The people that intersect with the project and each other form a kind of community bond, no matter how disparate they are in other parts of their lives,” McDiarmid says.

It’s a piece of art that couldn’t have happened without engineering. When Trickster was in Ryolite, Nevada, the temperature hit 122 degrees Fahrenheit. “Trickster places this solar-powered ice cream freezer in these remote locations. In order to achieve that, we needed a power supply and we used solar,” McDiarmid says.

Ryan Kephart (B.S.E.E. ’07, M.S.E.E. ’09) was on the senior project team that tackled the solar power for Trickster as well as the computer interface that allows passersby to blog about the sculpture on site. “For me, the most useful thing was the whole systems engineering process,” Kephart says, referring to the process of getting requirements from the client, investigating alternatives, designing, testing, and finally delivering the product. Specifically, the students were using batteries from the solar panel, so they had to come up with a DC power supply for the freezer and computer. They also had to make sure all components worked individually and then together as a whole. And they had to do it within budget.

Kephart says he’s grateful for the experience of working with a client who had no background in engineering—something engineers do all the time in the business world. “Some of the things were pretty unrealistic from an engineering standpoint with the money and time, so we had to meet in the middle.”

Avionics Engineering Center Director Michael Braasch served early on as an advisor to Trickster. “It is the senior design project that allows them to get real experience with a real project,” he says. “That was a fantastic learning experience for the students to be able to take the needs and goals and desires as expressed by Duane and translate that into a set of technical specifications and requirements so they could go off and build a system that would accomplish those goals.”

As for McDiarmid, he’s already thinking about his next high-tech work of art: a solar-powered backpack that can record and project video. “They don’t know it yet in the Russ College,” he says, “but I’ll be knocking on their door.”

See more online: tricksterproject.wordpress.com