Building Gears, Building Communities
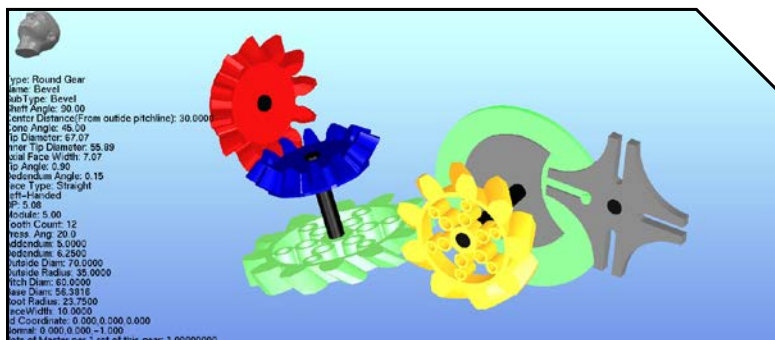
Art Fenerty's Gearotic software is making it easier for hobbyists to build both their dream gear designs and friendly communities.

Alex Cannella, News Editor

Outside of our industry, there's a whole slew of hobbyists working with gears to make clocks, art pieces, watches and all manner of bizarrely shaped gears (you know, all the people that usually end up featured right here in our Addendum section).

But it's no secret that gear manufacturing is pretty technical stuff. You need a very specific set of skills to properly design a gear, and if our magazine is anything to go off of, our understanding of how to make gears better is always growing. We may take it for granted sometimes, but the fact of the matter is that a lot goes into making a gear, and for hobbyists, the sheer amount of time and knowledge you need to properly design a gear can be an overwhelming barrier to entry.

Enter Gearotic, a program designed specifically to allow those hobbyists to make the gears they need with the least fuss possible. The program's designer, Art Fenerty, created it to offer a simpler alternative to CAD programs, one of the many hur-

dles of knowledge hobbyists need to get over to design their own gears. Gearotic is designed to lower that barrier to entry and let hobbyists spend less time worrying about the technical side of things and more time creating.

"It takes a great deal of time and energy and focus to learn how to draw in CAD," Fenerty said. "And it sticks with you just like learning a foreign language. As long as you use it constantly, you'll become a very good designer and you can make gears and so on with all kinds of CAD packages. But what I've found is for a lot of hobbyists, they don't have the time to dedicate to learning a CAD package."

Fenerty initially created the program to help facilitate his own hobby. After retiring, Fenerty turned to making wooden clocks to fill up his time, but he quickly found that there wasn't a satisfying program out there to work with, so he ended up making his own.

"I wrote the software for myself, but then decided I'd put it online and see if I could build a hobby community around it," Fenerty said.

He didn't stop there, though. As Gearotic has attracted more and varied fans, Fenerty has been growing the program to meet their needs. The program's grown from a basic gear template program to simulate an "eclectic mix" of other design projects such as sculpting designs for 3d printing, full gear assemblies, clock escapements, non-circular gears, Celtic knots and more, and he comes out with more features every year.

"I don't really have a vision for its end result, but I'm always aiming for a next short-term goal," Fenerty said.

Fenerty has a set production schedule where he works on a major feature from fall through spring, then "takes a break" in the summer to code a smaller project. This past summer, Fenerty made it possible for users to add flourishes, aesthetic touches for clocks, to their designs. Currently, he's working on a system that can simulate gravity for kinetic art pieces. He wants to offer kinetic artists a chance to simulate their designs and see what they'll look like before the construction phase.

"I try to focus on modules that no one else does, specifically because there are a lot of good CAD programs out there and there's a lot of really good drawing programs," Fenerty said. "So I don't want to reinvent the wheel. I'm just trying to make little modules like a toolbox. You may not use those tools every day, but it's kind of handy to have one in your back pocket."

But even beyond building clocks or a software program, Fenerty's in the business of building a community. Gearotic draws in like-minded craftsmen of all walks, and many of the software's most recent features come from community demand. Kinetic artists, for example, make up a sizeable portion of Gearotic's community since most kinetic art is based on the same principles as clock escapements, something the program already lets users work with. So expanding features specifically intended for kinetic artists makes sense as a direction for Fenerty to go next.

Occasionally, Gearotic even attracts a few businesses that come in looking for a particular non-circular gear design, as well. And according to Fenerty, everyone who comes through the community's virtual doors is friendly.

"With Gearotic, it's been very relaxing," Fenerty said. "Most people react enthusiastically when I release something...It's one of the few forums I've been on that nobody's insulting each other. There's no darkness in there."

Gearotic's community may not be the most well-populated community on the Internet, but it's certainly one of the most positive. I'd even go so far as to say that out of all the different things Fenerty's built over the years, a genuinely genial and upbeat online community is perhaps the most impressive of all.

For more information:
Gearotic
www.gearotic.com