

## It's the economy \*

# The 3D printing culture

**The hamlet of Highland** is holding its Oktoberfest block party Saturday evening, Oct. 19 from 4 p.m. to 9 p.m. The event will have both traditional and unusual elements. It's turning into a real blend of cultures. In melting-pot Highland, innovation wears many faces.

Among the traditional features will be the two beer gardens from Sal's and Vigneto Café. Homemade German sausages and pretzel rolls from Elia's butcher shop will fit right in. Learning how to brew beer with Studio 81 is a natural extension to traditional Oktoberfest activity. Several brew stations are expected.

There'll be opportunities for folks with various cultural interests.

There'll be live music from Unplugged Molly from 4 to 7 p.m. and jazz from 7 to 9 p.m. There'll be kids' chalk drawings everywhere.

Other offerings will be more unusual. Oktoberfests rarely offer every kilt-wearer a free beer. Since the Kiltmaker's Apprentice store is part of the hamlet's business core, however, this one will.

A slide show about Burning Man, the annual Nevada contemporary art event and temporary community based on radical self-expression and self-reliance, definitely strays from predictable Highland Oktoberfest fare. Studio 81 (in the alley next to that number on Vineyard Avenue) is organizing a discussion accompanied by art-making slides.

With Scott Gibson of Studio 81 and his colleagues at Squidwrench now heavily involved in the planning, this weekend's party event could take an improvisatory turn or two. "Scott is at the reigns [sic] for the Oct. 19 Oktoberfest in the hamlet of Highland," exulted an early Studio 81 Facebook posting. "Our party just blew out into the street! Let's make this a mini-maker fair Oktoberfest!"

There's a long continuum between the exploration of technology as a creative activity and its employment to produce innovative commercial products. Many of the 25 or so Squidwrenchers are active on both ends. Gibson, for instance, has made his living in the Hudson Valley for the past 18 years making backpacks under the brands New Sun Productions and Wingnutgear.com. He said that about six years ago he "began branching my design skill out into renewable energy systems and event marketing."

Gibson started Studio 81 in February in collaboration with Sean Swehla from Squidwrench, an affiliated makerspace or hackerspace which *New Paltz Times* reporter Mike Townshend described in an article as a creative collective of young professionals who met to collaborate on projects. Gibson said their goal was to create a space for creative endeavors based on three basic values: environmental stewardship, community service and economic stability. "The rest is, as I like to say, under construction."



LAUREN THOMAS

Some of the creative minds at Squidwrench in Highland.

### Hackerspace at Studio 81

Passing through a non-descript open doorway at the end of the short alleyway in which a car was parked last Thursday evening, about 25 persons crowded into an open house in Studio 81's windowless, cluttered, shelf-lined hackerspace in the center of Highland's hamlet. Main item on the agenda was a demonstration of 3D printing by Ed Nisley of Poughkeepsie. Surrounded by a half-dozen students from New Paltz, several of whom were chewing carefully on the hot edges of a cheesy slice of pepperoni pizza, Nisley focused on a small device that looked more a contraption than a machine. Other attendees chatted with each other, sat absorbed in their computer screens, or did other things.

The students' eyes remained glued on the little printer, which was imprinting a pattern on a hard surface with a stream of colored plastic. Finishing its run at one end of the surface, it quickly began to add another layer of the pattern on the same surface and then another, gradually building up a third dimension. This basic Makerbot printer, Nisley said in answer to a student, cost about \$1500. The cost of materials added about \$50 a spool, he said. (More complex 3D printers can cost tens and perhaps hundreds of thousands of dollars.)

Nisley was a good teacher. He demonstrated the machine's capacities, explaining how it worked and what he had learned to make on it. He seemed a very patient man, chatting, listening carefully and allowing the students to learn for themselves. The makerbot was basically run by a program, he said. If you can write a basic program, you can run the machine.

On the table next to him was a little white plastic rabbit the size of a small chess piece, and next to it a larger red one. Next to that was an intertwined lace of geometric black shapes. The machine on the table clicked away, fabricating a red chain similar to the black one. Nisley said it would take about 40 minutes for it to complete its task.

Except for rare intervals where the students needed to whisper to each other or to chase each other

around the crowded space, the teenagers proved rapt listeners. They stood clustered in a group next to Nisley, occasionally commenting to each other or to him. They had decided amongst themselves that the technology was very, very cool. In fact, awesome. That's a degree of praise usually reserved for the games, social networks and iconic websites with which they are more intimately familiar.

Scott Gibson and Sean Swehla were pleased. Like their upcoming participation in the Oktoberfest, Nisley's demonstration at this open house was widening their circle of acquaintances. Involving the teenagers, who were taking to the technology the way ducks take to water, was important. "We have something in common," explained Gibson.

### Digital design priority

A lot has been written about the incredible productivity of Silicon Valley and other hot spots of technology development. Various regions have strengths and weaknesses in this competition. New York City has unique attributes in a number of categories. State government has been struggling to find a successful formula for building other regional economies, trying to replicate its apparently successful bet on nanotechnology in the greater Albany area. For its part, the state-created Hudson Valley regional development council has identified a variety of priorities, including digital design and fabrication.

Combining a skunk-works atmosphere with education-based knowledge development – recommended by some experts in innovation – is no easy task. It's probably as difficult as combining the best qualities of Highland and New Paltz into a single culture.

For Aaron Knochel, a professor of art education at SUNY New Paltz, the participation of secondary school students in this collective experience is an important part of the local development of 3D printing technology. A new community space in New Paltz for digital innovation in which students will be heavily involved is in formation, he reported late last week. A non-profit corporation is being formed to support this effort.

Knochel, both an occasional member of the Highland hackerspace and organizer of the introduction of 3D printing technology at New Paltz's high school next spring, may well become a significant human link between the two communities.

The SUNY New Paltz administration is encouraging of community 3D development efforts, and indeed sees them as a potential major selling point to increase state financial support. Said college president Donald Christian at the unveiling of the 3D printing initiative earlier in the year, "It's a wonderful opportunity for us to link our faculty and students with businesses, community colleges, schools and nonprofit organizations to build a distinctive regional identity in 3D printing and related research, design and development."

Knochel intends to provide opportunities for some of his college students familiar with the technology to do field work at the high school in New Paltz in the springtime. He's working in the school with instructor Jennifer Cone to develop art education curriculum that involves 3D printing technology. "It'll be a new experience for the kids," said Knochel.

New Paltz High is expecting a 3D printer any day now.

— Geddy Sveikauskas

*This weekly column reports on economic trends in the mid-Hudson region. To read past columns go to Ulster Publishing's hudsonvalleybusinessreview.com.*

pose any significant problem for emergency vehicles. The incline of a speed hump is gradual, so drivers of horse trailers should have no concern as long as they respect the speed limit. Another objection we've heard is that speed humps create more noise. This only occurs when vehicles speed over them. We still believe that the installation of these speed-calming devices will make our road safer for all.

We would like to hear from the candidates running for town offices in Gardiner in advance of the Nov. 5 election. Who will pledge to take action for safer town roads? Speed humps can be purchased in hard rubber in any dimensions with the colored cautionary stripes already imbedded. They are cheap, guaranteed for 15 years and easily installed and removed. Will candidates support a study and a trial

of speed humps as a solution to ensure that all traffic will be forced to drive a reasonable speed on Dusinger Road and any other high-volume town roads?

**Paul Majestic, Robert Boles, Lisa Ponak  
Greg Gagne, Courtney Clarke, Jerry Pinkoski  
Barbara Petruzzelli, Jocelyn Broughton  
Kevin Domer, Sheila Gilday, Jerry Worix  
Maggie Domer, Lou Petruzzelli, Vicky Pinkoski  
Samuel Cristler, Winter Eyres, Melissa Gagne  
Steve Gilday, Alicia Reilly, Lillian Maurer  
Michael Vance, Edward Clarke**

*Gardiner*

### Which team are they on?

What we are witnessing in Washington is truly

historic – and not in a good way. A relatively small group of Congressional zealots have shut down the government because they don't want to insure the uninsured. Even more alarming, they are threatening to blow up the world economy by causing the government to default on its already-incurred (and Congressionally-approved) financial obligations. They claim to be fiscal conservatives but have, in fact, cost the nation billions of dollars in the form of higher interest rates imposed after the last time they pulled this stunt in 2011, to say nothing of dollars lost to individuals and businesses by the current government shut-down.

This is, of course, big news nationally. But it has implications locally including the shutting down of federal government offices, as well as the closing of