As the new editors of Tools and Products and Advanced Graphics Technology, we’d like to begin by thanking David Kasik for his dedication over the past seven years. The vision he set for these alternating departments lets us not only bring you the latest and greatest products related to computer graphics but also cover the cutting-edge research that will lead to tomorrow’s products. We welcome your feedback and suggestions for topics—just email us at lisa.avila@kitware.com and mjb@cs.oregonstate.edu.

In this issue we cover an array of products that transform the real world into digital space or bring digital objects into the real world. These products’ applications range from art to science, including home decorating, custom jewelry, customized prosthetics, and industrial inspection.

Panono
Panono launched its panoramic camera (see Figure 1) in November 2013 with an Indiegogo campaign that raised over US$1.25 million in just two months. This 36-camera sphere, called Panono, has 108-Mpixel resolution and captures a 360-by-360-degree photo for panoramic views and environment mapping. You can mount it on a stand and snap a picture. However, what makes it unique is that when you toss it, its accelerometer causes it to snap the photo when the acceleration is zero—that is, when the sphere is at its highest point. The device comes with a free app to stitch the images into the panorama. When you view the panorama with a mobile device, moving the device causes the view to change accordingly. Panono is expected to ship in September 2014; you can pre-order one now for $549.

For more information, visit www.panono.com/ballcamera.

Sense
For about the cost of a typical digital camera, you can add a whole new dimension to your next selfie. 3D Systems offers Sense, a $399 handheld scanner that automatically distinguishes the object you’re scanning from the background. The included software will clean your model for you, patching holes and letting you smooth out artifacts, ensuring that the resulting model is ready for 3D printing.

For more information, visit http://cubify.com/en/Products/Sense.

IronCAD 2014
IronCAD has just announced IronCAD 2014. IronCAD, a dark horse in the solid-modeling world, has long been known for its intuitive user interface and for letting users easily model simple parts and then increase complexity, one step at a time. Users accomplish 3D manipulation with the TriBall, a GUI element that allows 3D translation and rotation with a 2D mouse.

**Blender 2.70**

Now that you’ve captured or created that awesome 3D model, you might want to convert it into a poseable character, develop a complex animation sequence, and display it using photorealistic rendering. The software package that delivers this functionality and more is the open-source modeling, rendering, and animation program Blender. The just-released version 2.7 includes a tabs-oriented toolbox interface, performance enhancements, and a nifty wireframe feature in the renderer. It also includes a nice Standard Template Library analysis and export capability for those of you wanting to send your cool models to a 3D printer.

For more information, visit www.blender.org.

**Cube**

Cube (see Figure 2) is the desktop end of 3D Systems’ 3D printer lineup. The Cube machines are meant as an inexpensive entry point for researchers and home hobbyists. They melt and extrude ABS (acrylonitrile butadiene styrene) or PLA (polylactide) plastic from a spool. Cube models range from using one to three colors, with a starting price of $1,299. Each comes with free 3D design and printing software.

For more information, visit http://cubify.com.

**Peachy Printer**

Feel compelled to print your own 3D objects but can’t quite justify the cost of a Cube printer for your home? Then maybe a Peachy Printer kit is for you. Launched in September 2013 by Rinnovated Design, the kit promises to deliver 3D printing for just $100 and an hour of assembly. Affordable 3D printing is enticing to makers everywhere, and Rinnovated Design was able to raise over Can$725,000 through Kickstarter and Indiegogo in just one month to complete its R&D.

This printer converts your 3D model into sound waves (with a custom Blender add on), which then travel through your sound card’s headphone jack to control the x- and y-axis movement of a laser focused on a container of resin. The printer determines the z-axis position by counting the drops of salt water falling into the container (raising the height of the resin, which floats on top), using the microphone jack. Figure 3 shows an example result.

This design imposes no limitation of build volume; Rinnovated Design aims to print a full size canoe. The company delivered kits to beta testers at the end of March. The printers should be available to everyone somewhere between July and October this year.

For more information, visit www.peachyprinter.com.

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![Figure 2. The Cube 3D printers melt and extrude plastic from a spool; they start at US$1,299. (Photo courtesy of 3D Systems.)](image)

![Figure 3. The Peachy Printer, which promises to deliver 3D printing for just $100 and an hour of assembly, created this object. (Photo courtesy of Rinnovated Design.)](image)