**STAY IN THE LOOP**

- **APD1**: Design Methodology
- **APD2**: Technological Innovation
- **BA1**: Design, New and Traditional Technology
- **BA2**: Design, Production and New Technology 2
- **BA3**: Design as Emotional Experience 3
- **IDI**: Visualisation techniques
- **IxD1**: Project 1: Professional Product
- **IxD2**: Project 3: Interaction Concept
- **TD1**: Project 1: Vehicle Design
- **TD2**: Project 3: Vehicle Interior

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**The Week That Was**

- Single subject courses
  - User centered interaction design
  - Behaviour and aesthetics in the planning
  - Swedish for Industrial Designers 1 (Tuesday & Thursday 17:00)

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- Kitchen cleaning: IDI
- Workshop cleaning: BA2

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Check out the UID vimeo pages:
vimeo.com/uid & vimeo.com/ixdaeme
Weekly TED video

David Kelley: How to build your creative confidence

Is your school or workplace divided into “creatives” versus practical people? Yet surely, David Kelley suggests, creativity is not the domain of only a chosen few. Telling stories from his legendary design career and his own life, he offers ways to build the confidence to create. Watch it here: http://on.ted.com/bHRg

INSPIRATION

http://mandilouise.blogspot.com

Mixed-media work combines the textures and colors of antique domestic objects, the natural world, and an obsessive attention to detail.

http://dribbble.com/

What are you working on? Dribbble is show and tell for designers.

http://fyeah tattoos.com/

F*ck Yeah, Tattoos! Nuff said.

Do you have any inspirational sites or blogs that you want to share with the rest of the school? Send them in to wozzop@gmail.com
The dream, for those at Makerbot, is, is that rapid manufacturing will someday offer a viable alternative to mass-production. Instead of buying an iPhone case from a company’s website and having it shipped to me, I’ll be able to look at a virtual library of designs and print my own, right from home. Yoav Reches, the lead industrial designer at Formlabs, told me that this dream is definitely one his team believes in, but at this point, they’re more concerned with the role 3-D printing can play in the design process. “I think the main focus,” Reches says, “is research and development. (With 3-D printing) you can change a measurement, you can allow yourself to think in small numbers; you don’t have to commit to molds—it’s kind of heaven, in terms of design.” Basically, the Form 1 is intended not for the person who wants to print their own iPhone case but for the independent designer who’s making one.

To offer a more concrete example, Cranor explained how having a 3-D printer in the office helped as they were developing the Form 1 itself. “We were able to make tweaks to the prototypes really quickly. Because it’s like, ‘Oh, we want to try out a new servo motor. Should we go to the machine shop and spend a bunch of time measuring and drilling and cutting and milling if we just want to be able to mount this new motor to our device? No, we didn’t do that, we had an intern look at the data sheet of the servo, quickly CAD up a little mount, and then we 3-D printed it and bolted it onto the device.” Up until now, there wasn’t really a 3-D printer designed specifically with this type of rapid prototyping in mind.

The issue, members of the Formlabs team explained to me, is one of quality. For years, there has been a huge gulf between the results you can get from a professional-quality 3-D printer (which can cost $10,000 and up) and the more affordable hobbyist machines like the original Makerbot. The latter were sufficient for curious early adopters and tinker-happy makers, but they couldn’t really deliver the resolution and reliability designers often needed in the prototyping process. “We’re a company of designers and engineers ourselves,” David Cranor, one of Formlabs’ founders explained to me, “and there just wasn’t anything out there for us that would do what we needed to do at the price point we needed. So we all got together and decided to make our own dream 3-D printer.” And what kind of qualities does an independent designer’s dream 3-D printer have? Resolution, reliability, and repeatability. Basically, high-end results at a low-end price tag.

The central difference between the Form 1, which Formlabs is selling for $2,700, and other relatively affordable 3-D printers is the method they employ for printing. The Replicator 2 and others are extrusion-based machines, in which heated plastic is laid down layer by layer. The Form 1 uses the stereolithographic approach found in higher-end printers, where malleable material is hardened by exposure to certain wavelengths of ultraviolet light. Using stereolithography, the Form 1 can print layers down to 25 microns tall, about 1/1,000th of an inch, and four times smaller than the Replicator 2’s 100 micron layers. The UV-hardening resin is significantly more expensive than the simple plastics used by the extrusion machines, but Formlabs is guaranteeing customers at least 1 liter of resin per month at $29 for the lifetime of the machine, and Cranor tells me they’re now working on developing “a huge palette of materials” to work with the printer.

The Form 1’s distinction as a different type of 3-D printer—one intended to fill the gap between the hobbyist printers and ultra-expensive professional models—is evident in the look of the machine itself; its clean aluminum base makes it look more like a high-end kitchen appliance than a DIY machine. But not all designers are gear heads at heart, and the Form 1 was constructed with this in mind. Reches told me the team took great pains to make the printing process as simple as possible, from the straightforward software the team developed to the post-processing tools included in the package, intended to help people manage the somewhat messy stereolithographic process. In his 15 years in the field, Reches explained, he found that studios were often divided into “the dirty area” and “the clean area”—one side “dusty” and “full of chemicals” and the other kept tidy for computers and paper work. With the Form 1, he says, “I think we managed to cross this boundary.”

The independent designers and engineers of the world seem to agree. In just a week and change, more than 1,000 people have pledged $15 million to nearly 500 preorderders for the machine. We might still be a ways off from buying 3-D printers at Walmart and printing Phone cases (or, by that time, Google Glasses croakies) in our homes, but the enthusiasm the Form 1 has been met with shows that there is a demand for the technology right now. “3-D printing that everyone has access to on their kitchen table is definitely something that’s going to happen in the future,” Cranor told me. “But there are a few steps that need to happen before that.” You can read more about the Form 1 on its Kickstarter page: http://kck.st/P4QWSx

Author: Kyle VanHemert

Editor’s note: Formlabs ended up gathering almost 30 times their asking amount, you can read about their current developments at their site formlabs.com
It’s one of the most enduring Swedish winter traditions. The tradition of Lucia brings some much needed light into Sweden’s winter darkness.

My colleagues have told me to get up early for Lucia. Who is Lucia?

Lucia is, or was, St. Lucy, a Catholic saint martyred in Syracuse in 304 AD. In Sweden, she is celebrated in early morning ceremonies on December 13th. In schools and workplaces, a nominated girl or young woman will don a white dress and wear a wreath of candles on her head. The ceremony is usually accompanied by early morning servings of glögg (sweet mulled wine), lussekatter (St. Lucy buns) and ginger snaps.

Why does Sweden go so big on Lucia?

Quite how St. Lucy worked her way into Swedish tradition is unclear, but December 13th was the shortest day of the year under the Julian calendar, which Sweden followed until the 18th century.

It is traditionally held that a maiden dressed in white robes and wearing a crown of candles brought food to starving villagers on the shore of Lake Vänern. Lucia also has links to a German tradition of girls dressing as “Christ children,” handing out Christmas presents.

Traditionally, Lucia processions would be held in the home, with daughters dressing up and bringing coffee to their parents. Now, the practice is widespread in workplaces and schools, and newspapers frequently run Lucia competitions for readers.

Is this just something for the girls?

Even in these days of sexual equality, the girls have pretty much got Lucia wrapped up. Still, men are now allowed walk-on parts as Lucia’s acolytes, known as “stjärngossar” or “star boys.” They also wear the long white robes, but instead of the crowns they wear white, pointy hats.

Didn’t I hear something about a song?

Indeed, the Lucia celebrations are accompanied by music, particularly the Neapolitan Song Santa Lucia, which has been given Swedish lyrics which speak of St. Lucy bringing light in the darkness. It’s haunting melody make it a firm favourite for many Swedes.

All sounds very pleasant.

It is. There is a more raucous side, however, with Lucia night celebrated by high school pupils partying all night to celebrate the approach of the Christmas holidays.


Editor’s note: You will have to wait until Thursday to see what the Lucia celebration at UID usually entails.

CREDITS

Thanks for your contributions.

Future articles & photos can be sent to: wozzop@gmail.com by Thursday evenings. We love hearing from you!!

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