



Make What You Desire

Submitter:

Denise Allan

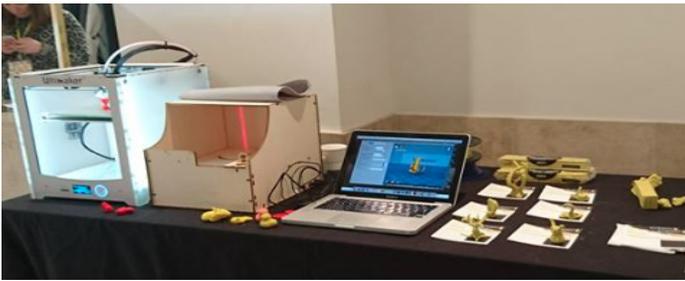
Edinburgh Napier University

denise.allan@napier.ac.uk

Denise Allan is a PhD candidate at Edinburgh Napier University. Her research is focused on design and making in education contexts and how it can impact social capital. She runs a business and social enterprise which provides 3D printing education in Scotland through schools, youth organisations and charities.

The intention of this installation is to make the user feel liberated from manufacturing constraints. They are invited to use plasticine to model anything they like. This will be 3D scanned and 3D printed to form part of a larger visual archive of what people would 3D print if they could print anything. Users will be able to access this visual archive online and download their scan which can be 3D printed wherever they have access to a 3D printer. The scanner is a little different from conventional scanners though, it was developed from an open source project by Denise, to improve the scan quality of small objects. Conventionally 3D scanners struggle to pick up fine details. This scanner is still a work in progress but has been used at several conferences as a new way of conference documentation. The scanner does not always see what we think it will and therefore creates some interesting interpretations of users models.





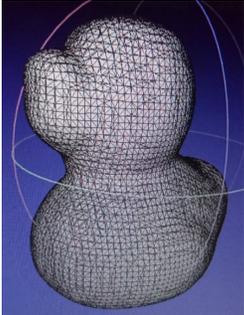
Set up of the scanner at the Research Through Design conference at the National Museum of Scotland. L-R 3D printer, 3D scanner, laptop, models made by delegates. As many models were printed as possible at the conference itself.. It takes as little as 30 minutes to turn the lump of plasticine into a 3D printed model.



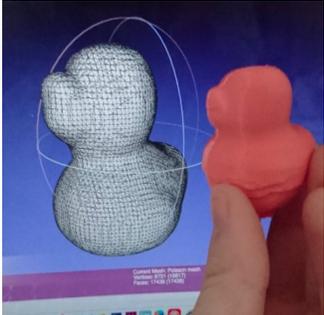
Close up of plasticine models made by delegates. They were asked to make an object based on their experience or something they learned at the conference.



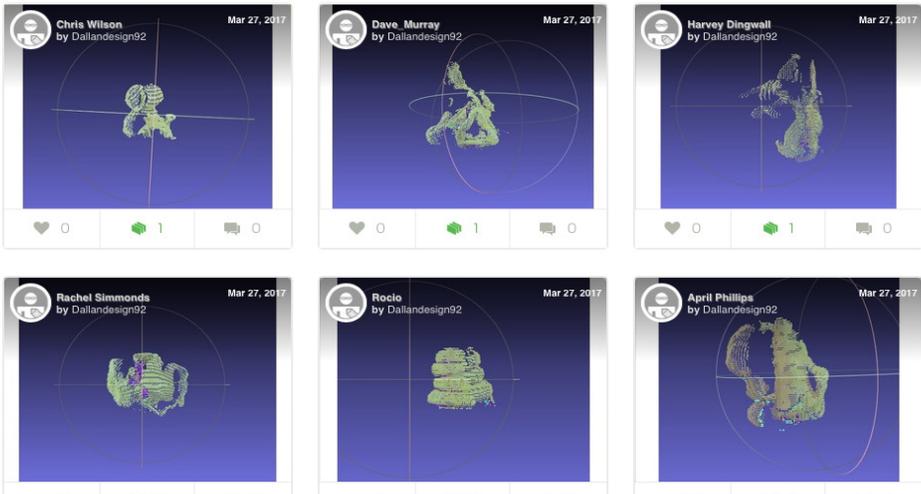
Interior of 3D scanner. It was made using an arduino board, a motor, a laser pen and an old webcam housed in a laser cut box.



Meshed scan of the duck.



3D printed duck from scan.



A screenshot of the visual collection online.

'Make What You Desire' is a project which forms part of Denise Allan's PhD research. Her research surrounds the idea of digital making and how it can be used to increase social capital. One of the issues in getting digital making tools into schools is that it has, to an extent, become branded as gimmicky and not the ground breaking technology that was promised. So, to justify this integration into schools Denise is trying to find out what people want to print. While, at the same time introducing as many people to the technology as possible to foster a familiarity with it, so that when schools and community spaces do get 3D printers people already know how they work and want to use them. Additionally, 3D printing offers the unique opportunity to create things which were never possible before, such as complex internal structures and undercuts. As designers, engineers and makers our imaginations are somewhat limited by what we know is possible. 'Make What You Desire' provides a tool for playful interactions to challenge what is really possible.

Technical specification

The project takes up approximately 100x70cm. It needs to be manually operated to initiate scans but users/visitors/participants can use the plasticine at any time to make their model. It requires a table and power supply.