



<http://atf14.otdac.org>

Opening Times: This is the first time you've played around with genetics, how've you approached this and how did it come about?

Oliver Sutherland: The idea of directly using genetics came from a conversation with a friend who works in synthetic biology. We spoke about how he uses this process, cutting up genetic code and adding new bits to adapt proteins and antibodies; taking one element from some other genome and re-coding it so that it performs differently. This was about 18 months ago. You can essentially cut and paste content into a sequence with a very simple text edit software that works with the predefined rules of genetic code; whether the final genome will work or not in reality is another problem. The processes used in researching and modelling this code is at the primary stage and all theoretical. It was the reduction and simplification of a living object into a digital language rather than in a petri-dish in a Lab that interested me, this idea of potential within code. This is a really crude analogy, but without the browser to decode the html there's no webpage; this is kind of the same. With the right knowledge or library of genomes you can make or recode whatever you like within the bounds of life.

So, after sitting on this conversation for a year I started to think more specifically about this way of using genetic code as a medium, a sort of impossible and conceptual process based entirely in a text file, that has very little value or purpose without particular knowledge, tools or context to realise it within (something like early web languages or beta file formats). This is a new language that will potentially become useable as domestic technology catches up with the file format. This seems to be quite a common trait in technology, one part moves forward and the next part catches up later, but its rare to be able to see it happening and try to catch it in mid-flight.

Until this time the work is dormant. The inability for it to be realised now and relying on future iterations of 3D printing technology and the user to print or actualise it....this sounds a bit ambiguous and petulant as an art work...but the aim is for this work to be realised in 15 years rather than now through the reproduction and replication of the file through peer to peer sharing. The file is sitting out-of time and just slightly out of sync until that point where it can be made. A proto-anachronistic object.

This is where the idea of zipping the file into a torrent sort of settles the work for me. Rather than delivering this file in a physical format, a CD or Drive or having it as text or a html page, the torrent file allows it to lie passive on hard drives and servers. It allows the file to be distributed and disseminated into places of potential rather than languish in a draw, as long as its active somewhere and being seeded, it can be used, in so much as it will carry on being picked up and downloaded.

OT: Philosophers and theorists talk about how there is a disconnect between culture and technology now; they are out of step, for example Bernard Stiegler says “technics evolves more quickly than culture”. As if we’re in such a flux of new technology we don’t have the capacity or “cognitive mapping” to process it within culture and cultural production. Like you said, this code is dormant but it’s anticipating how it will be interacted with and used later on. You’re processing or working through this completely new media before we even quite know what we’re doing with it. It’s the information to equip the viewer to produce something. It’s nearly like an instruction sheet, but bound up with all of the concerns of what and how to use this new tool.

OS: This has been an overriding theme within a lot of my work, but there's something more specific with this piece. Something that falls out of my hands as an artist working with industry (synthetic biology) and into a mode of distribution that ensures its circulation in the future.

So there was a point in creating this work where I wanted the final file to function, compared to just chopping and pasting code and hoping for the best or implementing some sort of data-mashing. I worked with a synthetic biologist to try and ensure, at a theoretical level, that the altered genome functions at the point that it’s realised, whenever that might be. There would be a lot of additional work within the implementation of this genome; making sure all the alterations stuck, swapping in and out all the sections that we changed, but this would be the same for any file format at the point of actualisation ... as in the software should take care of this ... so a 3D printer isn't just a one format printer anymore, the hardware and software can utilise a number of file formats and produce the same result, cross-platform.

One option is that this file is dormant and unknown and might stay that way, dependent on the uptake of this file format. But additionally it might become as ubiquitous as .STL files, or any other formats that have become common due to the expansion of hardware or a platform.

OT: There's an element of limitedness - viewing it on the site, there are a limited amount of times these files can be downloaded. What's your thinking behind that?

OS: I wanted the work to be downloaded, not directly from the site, but just as a torrent file. This allows the file to be dispersed from the site and exist on its own (or not, whatever happens).

The finite number of initial downloads is a way of limiting its initial exposure. There's likely a 3 or 6 week window where people will view this work or the page and will click the links. After that it can be revisited but there's a life span to how and when this initial "seeding" is available.

The work then exists solely on people's servers and hard drives. It's up to users / audience to share and seed the torrent file.

OT: Why this plant?

OS: This was the one of the first plants to have its genome sequenced, due to its low chromosome count. The genome is also freely available to download from a number of sources. This open access means this one genome is widely used within the genetics community - there are whole websites, forums and papers dedicated to growing and altering this one genome. It's an open source plant, something that anyone can access and adjust, there's nothing special or original, it could almost be seen as a 'standard'.

The original file that has been altered is an Arabidopsis Thaliana, a very common weed (often found in the corners of pavements or growing outside a doorstep), so it has a nice relation to the structure of the distribution, with torrents seeding content to other peers. A torrent file is "seeded" by peers who have the original files, as more users download and seed the file the network of users increases, so does the number of potential locations to draw this file / information; the file is seeded more and copied to more sources, speeding up the download speed and expanding the "torrent" of data as the network becomes larger. Both the weed and the torrent file are incredibly resilient and easily replicable.