

Signal: A Systems-based Creative Collaboration

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1. INTRODUCTION

This paper describes “*Signal*” a new connected digital artwork created by Esther Rolinson and Sean Clark. In common with much of their collaborative work, including the award-winning artwork “*Flown*” (Rolinson & Clark 2016), *Signal* began as a hand-made drawing by Esther Rolinson, before being developed in to a light piece and then an Internet-connected digital artwork with the involvement of Sean Clark. This paper describes the systemic nature of both collaborative process and the artwork itself.

2. SIGNAL

The incarnation of *Signal* described here (and exhibited at the conference) takes the form of three framed screens, each containing a small internet-connected PC. Each screen displays an image composed of the original sketch plus an animated set of coloured concentric circles moving at different speeds.



Figure 1: The three screens forming *Signal*

Circles grow out from the centre of each screen, reach the edge of the drawing and then return to the back centre, where they are swapped with a colour from another screen. The process continues with a constant recycling of colours as they pass between screens.

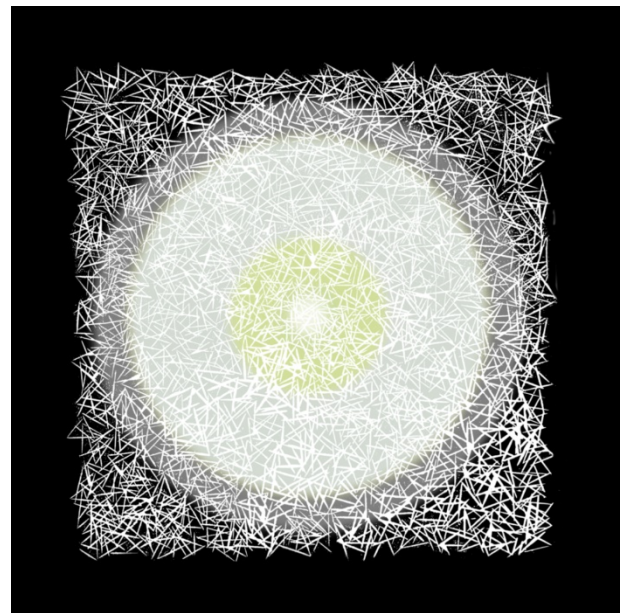


Figure 2: Concentric circles of colour in *Signal*

2. OPEN AND CLOSED SYSTEMS

Signal can be seen as a single closed system made up of three individual open systems. The colours contained within each screen are continuously being exchanged with the other screens, and hence are unlikely to be the same form one minute to the next. However, the pool of colours used across the whole system remains the same. This is intended to be analogous to an ecosystem in nature where individual organisms maintain their living structures through an intimate exchange of materials with other organisms. It is

also a realisation of the Connected Digital Artwork concept previously presented at the EVA London conference by Sean Clark (2016).

When first exhibited, *Signal* formed part of the larger *A Cybernetic Ecology* exhibition (Clark 2017) where the three screens were also able to exchange colours with other artworks in the exhibition in a way similar to that developed for *ColourNet* (Clark & Edmonds 2013).

The colours accepted by *Signal* when operating as part of this wider network had to fall within the palette of colours that the artists felt were appropriate for the artwork to maintain its aesthetic integrity. Again, similar to a living organism, the system was only open to the material necessary to maintain its structural form.

3. A SYSTEMS-BASED COLLABORATION

A systems-based approach was been used throughout the construction of *Signal*, as well as in its contextualisation.

The hand-made drawing that forms the centre of the piece was produced by Esther Rolinson using a rule-based technique as part of a meditative drawing process.

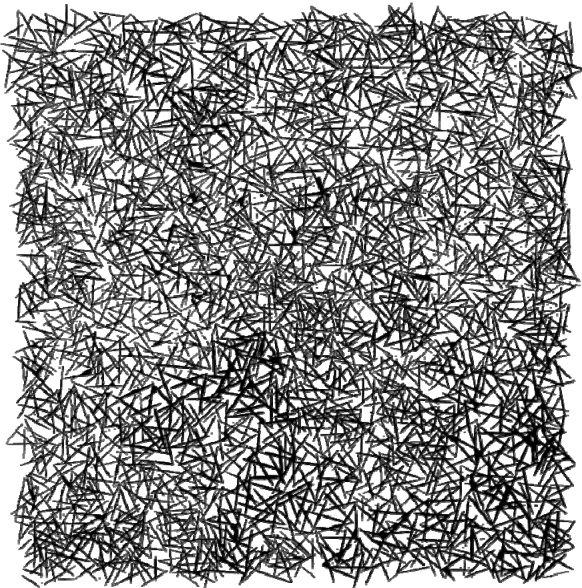


Figure 3: The original hand-made drawing for *Signal*

The use of rules of construction is then applied to the development of the animated elements and then to the connected behaviours.

At each level, it would be possible for a committed viewer to make sense of the rules used to construct the work. However, the multiple layers used add to the complexity of the piece and it is not expected by the artists that viewer need understand the full systemic nature of the artwork to appreciate it.

4. NEXT STEPS

As the collaboration develops, opportunities for closer connections between the Esther Rolinson's drawing systems and Sean Clark's digital systems are being explored.

This is presently focussed around the use of drawing capture to generate patterns and rhythms that can be used in the creation of the rules for the digital animations.

Similarly, we are looking to find ways to use the patterns produced by the digital aspects of the work to inform the sketching process.

We hope that the result of this collaboration will be the development of a hybrid analogue/digital arts practice. Something that combines the sketching process and digital technology in a way produces new artworks that explore territory beyond that of either existing medium.

5. REFERENCES

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