

_searching _the_garden _of_eden

1. Introduction:

Inspired by generative art, automated systems and digital philosophy, *searching_the_garden_of_eden* is designed to explore connections between creative computing and some philosophical concerns regarding the origin of our universe as defined by digital physicists. The workshop will be conducted by the artist and technologist fito_Segrera during Casey Reas' exhibition "ToxScreen" at Chronus art center.

Casey Reas is one of the creators of processing, the creative programming framework for artists built over java. Reas writes software to explore conditional systems as art. Through defining emergent networks and layered instructions, he has defined a unique area of visual experience that builds upon concrete art, conceptual art, experimental animation, and drawing.

2. Conceptual Framework:

The idea that the universe is a computer or a computational process might seem, for many, like a category error; nonetheless, computers are things made from the same 'stuff' the universe is made of. Digital philosophy is a modern reinterpretation of monist metaphysics, one that envisions the universe as a singleness, ONE substance from which everything else arises equally, without particular names and forms; these two last aspects of our reality are confined to the human psyche. Digital philosophy replaces monads with aspects of the theory of cellular automaton. In order to take this stream of thought seriously we need to get past all non-trivial barriers. The idea is that computation is not a metaphor for the universe, nor is the physical evolution of the universe analogous to digital. The universe can be then referenced as a gigantic ongoing computation just as it can be said to be a bunch of particles interacting energetically via some physical laws.

A cellular automaton (CA) is a discrete computational model able to simulate complex dynamics in systems with simple initial rules. CAs are often used to study aspects of evolution, genetics, physics, philosophy, among others fields of knowledge. This workshop will be dedicated to explore ontological aspects of CAs; metaphysics, digital philosophy and digital physics will become our common conceptual ground. We will continue by understanding basic models and rules used in this type of computational universes (CAs), while thinking on ways to theorize, speculate, and construct artistic discourses around them.

searching_the_garden_of_eden derives from the concept of Garden of Eden (GOE) used in Cellular Automaton studies, which at the same time emerges from Abrahamic religions (Judaism, Catholicism, Christianity, etc.). In CAs theory, GOE is a very unique pattern of cells/units that does not have a origin; meaning that there is no possible configuration in any CA universe from where this can emerge. The idea of a GOE in computational theories is as interesting and technical as provoking and critical.

The workshop is concept-tech based, and inspired technically by Casey Reas's exhibition. We will explore the generation/modification of images (videos and/or stills) using CA algorithms.

2. Technical Skills to Teach:

Besides the conceptual framework of the workshop, the following technical skills will be taught:

2.1. Cellular automaton and programming in Processing:

- a) Conway's game of life (and other CA algorithms)
- b) Video and image analysis

3. General Requirements:

The workshop will be instructed entirely in English. If you don't feel comfortable with English its recommended to come with someone who helps you translate.

3.1 System Requirements:

The entire workshop will be given using a UNIX based platform (LINUX or OSX) – Windows users are encouraged to install a partition with either UBUNTU LINUX or MINT. If you are comfortable with windows and can handle any software and dependencies installation processes by your own, then it is totally fine.

3.2 Required Basic Programming skills:

It is important that selected participants come prepared with all the following mentioned basic skills, since the workshop time is limited to more specific conceptual and more advanced technical topics. In case you are not familiar with processing please refer to our *resources* (section 5) with some suggested tutorial pages in order to get prepared for the workshop. The required technical knowledge is the following:

Processing: simple drawing, shapes, general structure, arrays, data types, for loops, conditionals, functions, classes.

4. Course Program

25/09/2015 DAY-1

19:00 – 20:00 Workshop Introduction, conceptual framework and Open Discussion.

26/09/2015 DAY-2

13:00 – 14:40 Processing Review

14:45 – 15:00 Short Break

15:00 – 18:30 Conway's game of life

27/09/2015 DAY-3

13:00 – 14:40 Video and image analysis

14:45 – 15:00 Short Break

15:00 – 18:30 Project development and tech assistance

5. Socialization:

The result of the workshop is a collective piece which emerges from the inquiry on the conceptual framework proposed and the technical skills acquired during the process. The developed piece will be hosted on Chronus Art Center's (CAC) online exhibit and installed on a screen in CAC's gallery.

6. Resources

5.1 Download & Install Processing:

<https://processing.org/>

5.2 The Nature of Code:

<http://natureofcode.com/book/>

5.3 Official Tutorials:

<https://processing.org/tutorials/>

7. Suggested Readings and Other Media:

Cellular Automaton Modeling:

<https://www.youtube.com/watch?v=EyrwOf239M4>

KELLY KEVIN, God is The Machine, Wired Digital Inc., URL:

http://archive.wired.com/wired/archive/10.12/holytech_pr.html

A Collection of Reviews of ANKOS and Links to Related Work, URL:

http://shell.cas.usf.edu/~wclark/ANKOS_reviews.html

Conway's Game Of Life:

<https://www.youtube.com/watch?v=CgOceZinQ2I>

Turing machine

<https://www.youtube.com/watch?v=dNRDvLACg5Q>

Facilitator's Bio

fito_segrera is an artist, technologist and Head of Research/Creation at Chronus Art Center, Shanghai. He studied fine arts and audiovisual/Multimedia production at Jorge Tadeo Lozano University of Bogotá, Colombia and completed a MFA in Design and Technology with honors at Parsons, The New School, New York while being a Fulbright Scholar from 2013 until 2015. His current research and creative practice appropriates elements from digital philosophy, artificial intelligence, monism and modern physics while using physical computing, software programming and information/telecommunication technologies to inquiry in fundamental ontological questions regarding the nature of reality and the physicality of the universe. His main exhibitions are: SIGGRAPH 2014, Collision 20 & 21 at Boston Ciberarts Gallery 2014, Huston International Performance Biennale 2014, SXSW Austin TX 2014, EYEBEAM New York 2013, Agora Collective Center Berlin 2013, Dorkbot NYC 2013, Harvestworks New York 2013, Salon Regional de Artistas del Caribe, Web 2.0 Espacios alternativos 2012, Ripping mix, burn, rip 2010, Bogotá Biennale 2009.