ALGORITHMIC AESTHETICS
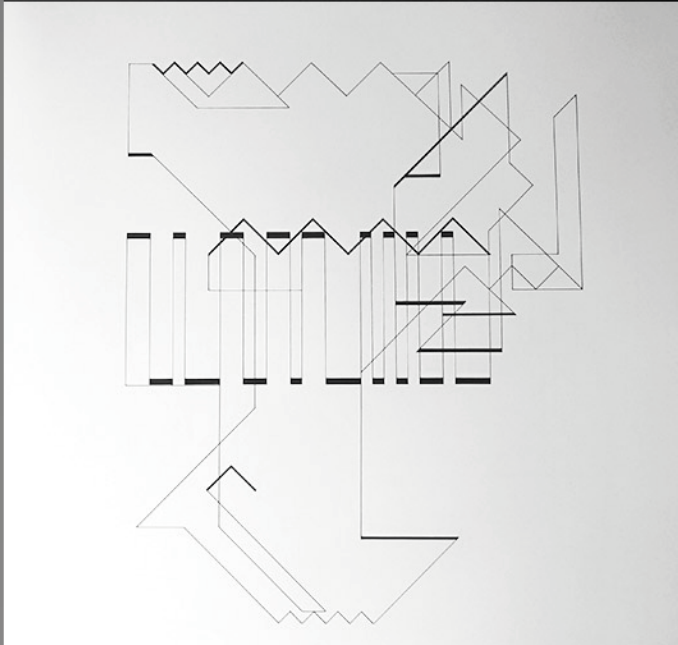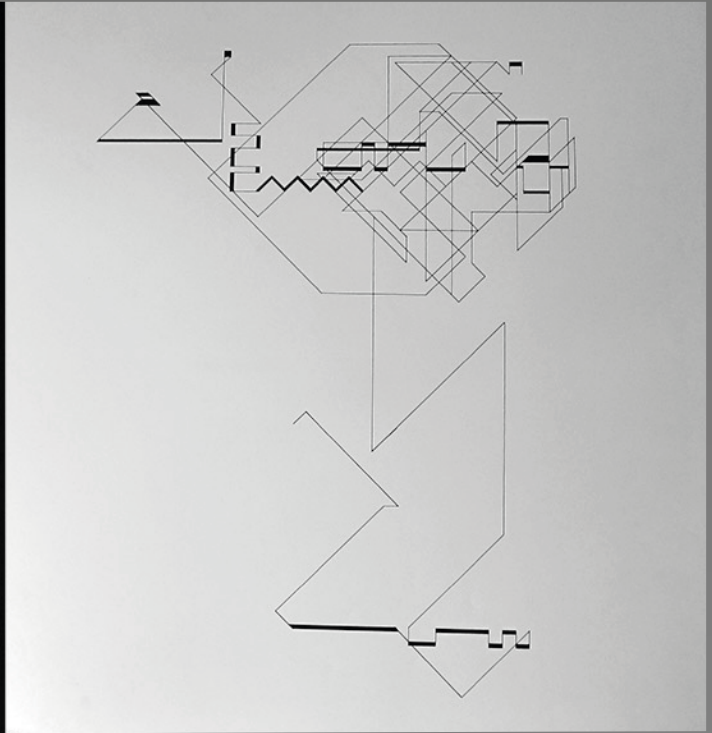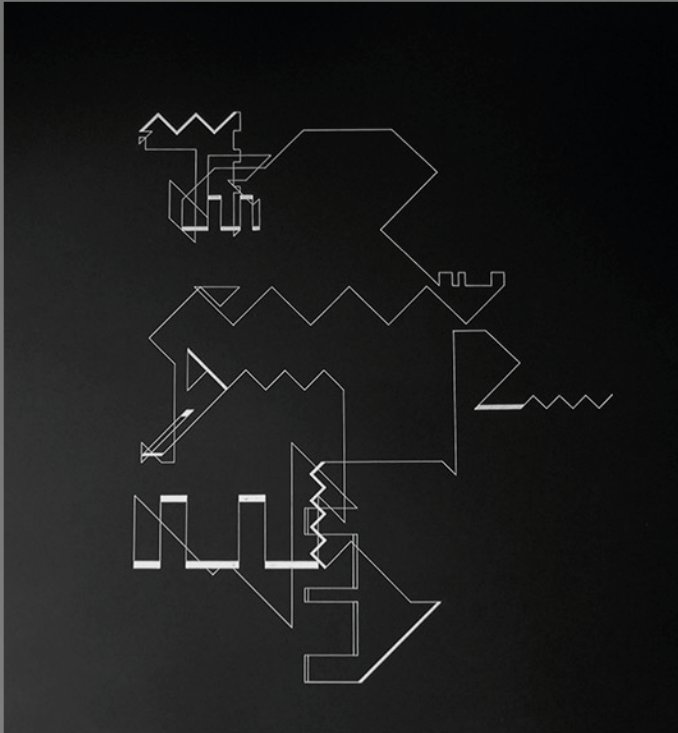
ANTOINE LEBLOND

RÉMI POIROUX

MATHURIN RAMBAUD

IMAC

INGÉNIEUR
ESIPE

TABLE OF CONTENT

PICK AN ARTWORK

Manfred Mohr, P-18
Random Walk, 1969-1970

ARTWORK PRESENTATION

The author of this masterpiece is Manfred Mohr. Mohr decided to name his art P-18 Random Walk : the name 'P-18' refers to the program which was used to generate his drawing and because it uses randomness this same program could generate a lot of different drawings while keeping the same code. He made this art between 1969 and 1970 in Paris and because the computer prize was very high in order to make this artwork Manfred Mohr had to use a computer and a plotter from the Paris Institut Météorologique.

A plotter is a device holding a pen and whose movements are controlled by a computer (see the image below) :

A plotter at the Aix-la-Chapelle
School of Mine in 1970

ARTWORK PRESENTATION

The plotter drew this art on a paper with ink and then the art was after mounted on board. Its height is 60.8cm and its width is 54.8cm. We can also mention that there are two versions of this art : one with black lines drawn on a white background and one with white lines drawn on a black background, both made by Mohr himself.

Mohr uses precise mathematical logic in his program that allows him to create very complex algorithms that can be handled by a computer.
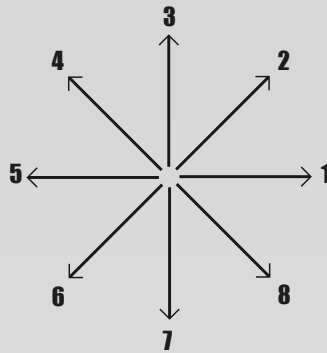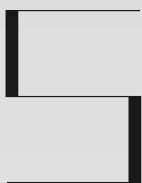
VISUAL ANALYSIS AND PSEUDOCODE

The art is only composed of horizontal, vertical and diagonal lines. Moreover, the lines are all connected together and sometimes the weight of the line is bigger when the lines seem to create some sort of "stairs" pattern.
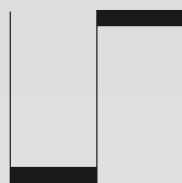In order to make this art we can imagine that Mohr thought about something like this :

- Randomly move in the canvas each frame with a random length and between 8 directions like below :

- Sometimes randomly create a pattern with a random length between these 4 :

| Vertical stairs | Horizontal stairs | Vertical zigzag | Horizontal zigzag |

- Always check that the line is drawn on the canvas and does not cross the borders !

CODE AND GENERATIVE OUTPUT

Open the index.html file in your browser

P5 link :

https://editor.p5js.org/antoine.leb/sketches/s4bsaZTZT

We added the features below :

- Drawing is animated

- Pause or resume the animation

- Tweakable parameters

- Swap background and line color

- Save the canvas in a .png file

Have fun !

GALLERY