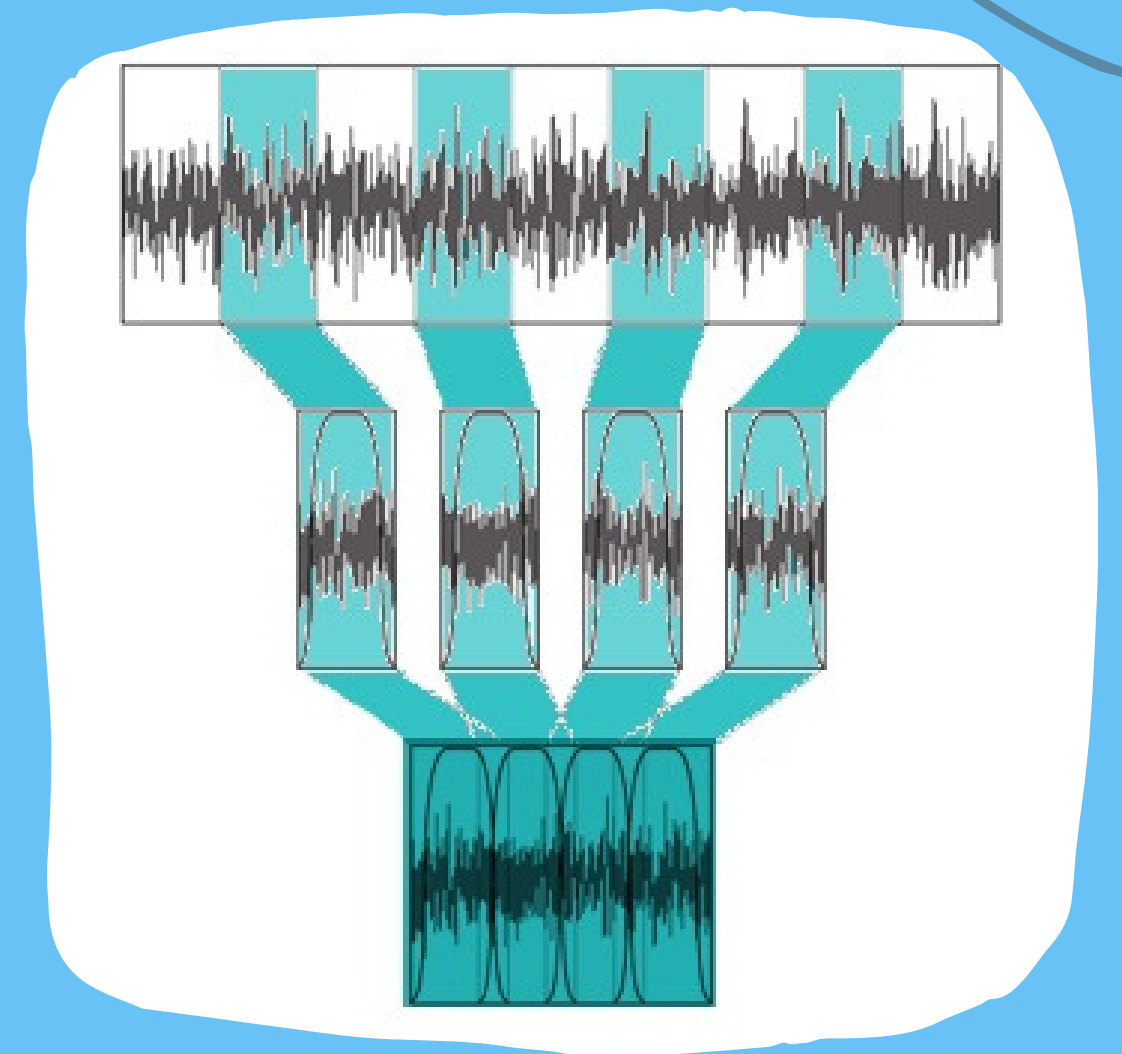


Granular Synthesizer

ACTaM PROJECT
Gargiulo, Morena, Orsatti, Perego

The idea behind

GRANULAR SYNTHESIS CONSISTS IN THE CREATION OF MULTIPLE GRAINS OF LENGTH COMPRISED BETWEEN 20-100 MS. THOSE GRAINS GENERATED FROM AN AUDIO BUFFER CONTAINING THE ORIGINAL SIGNALS CAN BE PLAYED AT DIFFERENT RATIO OR ORDER CREATING PARTICULARLY INTERESTING SOUND TEXTURES



Granular.js

- WORKING PRINCIPLE
GRANULAR, AUDIOBUFFER, VOICE
- PARAMETERS LINKED TO GUI
- MODIFIED LIBRARY

Used libraries

Granular.js

Wavesurfer.js

P5.js

Firebase

Bootstrap.js &
Popper.js

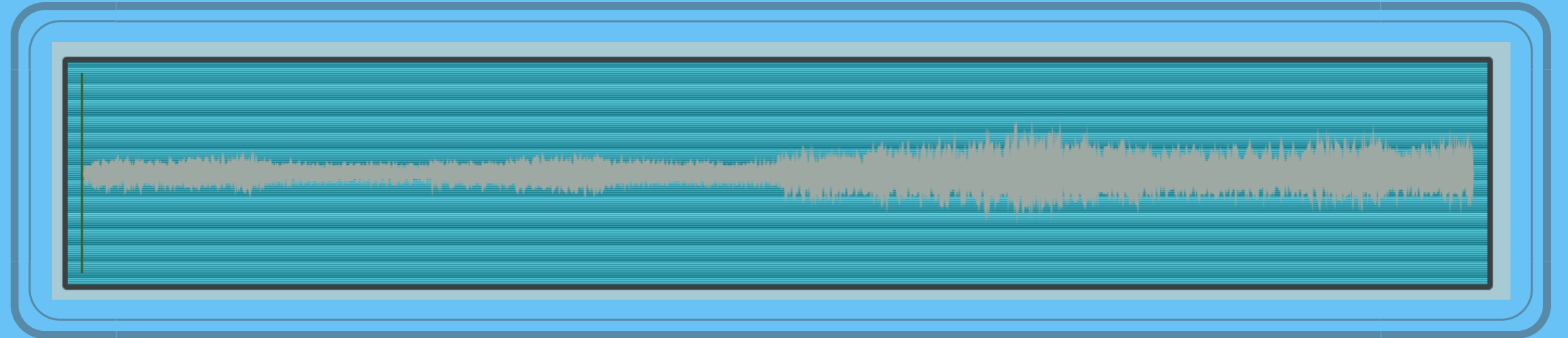
jQuery & jQuery
Knobs

Our features

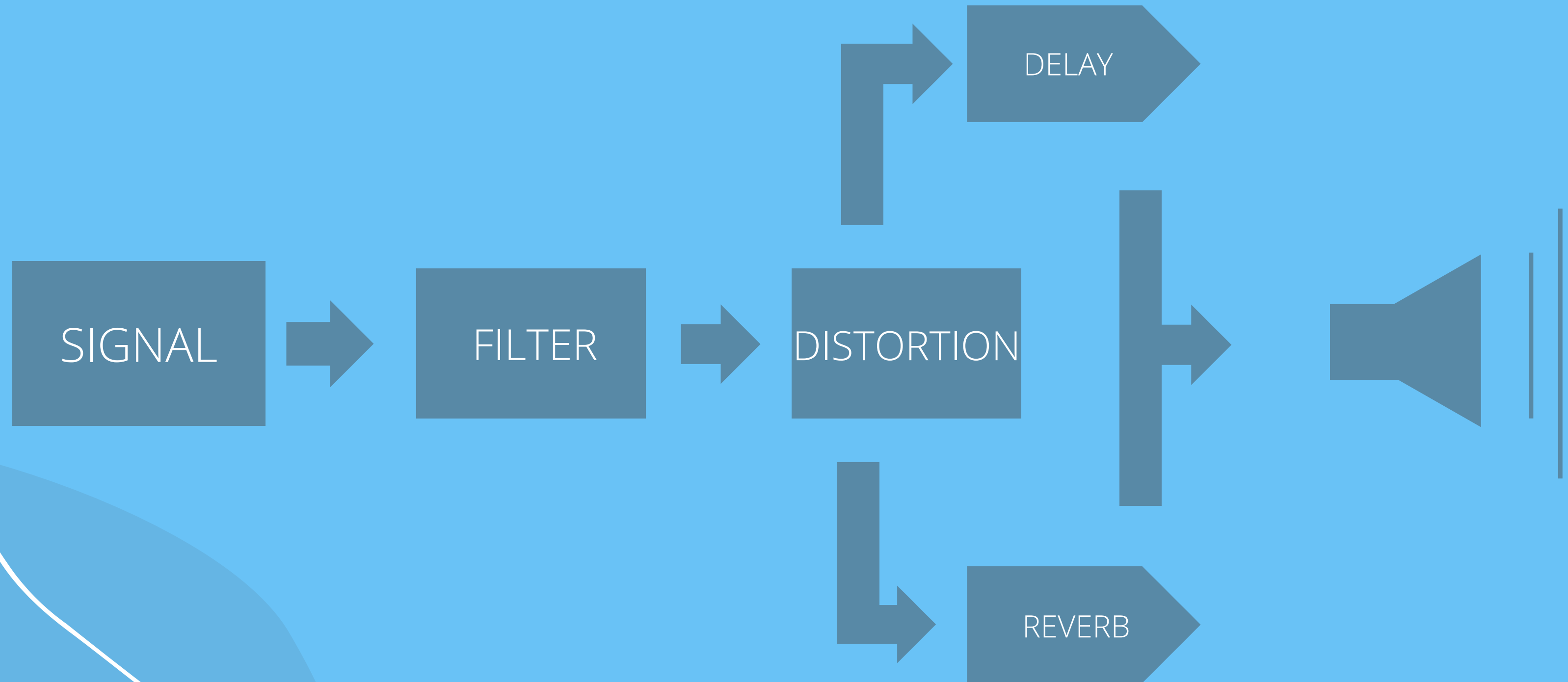
REAL TIME GRAPHIC WAVESHAPE FEEDBACK,
CUSTOMIZABLE GRANULAR SYNTHESIS
PARAMETERS, PRESET SELECTION & SAVE
POSSIBILITY, EFFECTS AND MIDI CONTROLS



Controls and audio buffer features



Effects routing



Effects Controls



THE EFFECTS ARE PREBUILT FUNCTIONS OF THE p5 JAVASCRIPT LIBRARY CREATED WITH THE CLASS "Effects()". THEIR PARAMETERS ARE CONTROLLED THROUGH THE KNOBS PRESENT IN THE GUI AND EACH INDIVIDUAL EFFECT CAN BE TURNED ON OR OFF BY PRESSING THE RELATIVE BUTTON

Firestore integration



SELECT A PRESET FOR THE GRANULAR PARAMETERS
DEFAULT

SAVE PRESET

SELECT A PRESET FOR THE GRANULAR PARAMETERS
DEFAULT

DEFAULT

LO-FI ROOM

UNDERWATER

DRUM'S BRAIN

SKAT

USERPRESET0

USERPRESET1

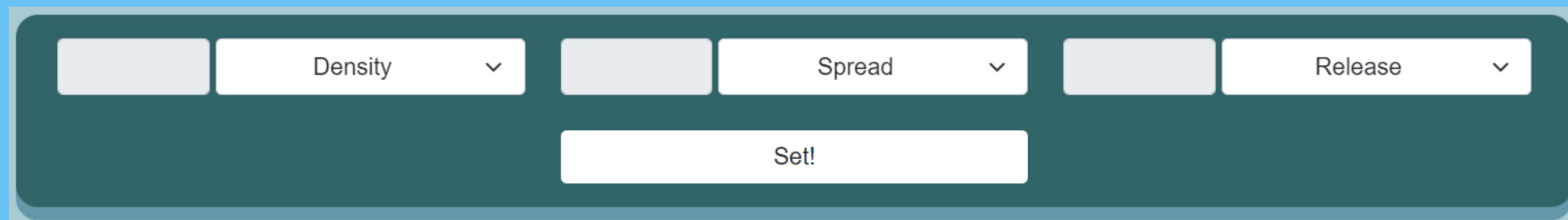
USERPRESET2

USERPRESET3

USE DIFFERENT PRESAVED PRESETS AND SAVE YOUR OWNS!

MIDI Protocol

THERE IS THE POSSIBILITY OF CONNECTING A MIDI DEVICE WHICH IS AUTOMATICALLY RECOGNIZED AND SYNC'D TO THE SYNTH ENGINE. VELOCITY AND NOTES ARE HANDLED AND SCALED ACCORDING TO OUR ALGORITHM



WE ALSO MADE IT POSSIBLE FOR THE USER TO PROPERLY LINK ANY INTERACTIVE CONTROL HE MAY HAVE ON HIS KEYBOARD TO A SET OF DIFFERENT SYNTH PARAMETRES

