

## Info

### Instructions and explanation

The project works quite simply. The Arduino reads the Inputs from the different kinds of sensors (buttons, potentiometer, photoresistor and temperature). The Input values that the Arduino reads are sent to TouchDesigner through Serial communication when Button1 is pressed. This Button serves as a kind of on and off switch for the communication. The different values are separated by one space so that the serial message read: 'Potentiometer' 'Photoresistor' 'Temperature' 'Button2'

Once they arrive in TouchDesigner they are received by a Data operator. All the values from the arduino Inputs are sent in a line. The different values are separated by one space, this is important because that is how the one line of data is transformed into a table in Touchdesigner.

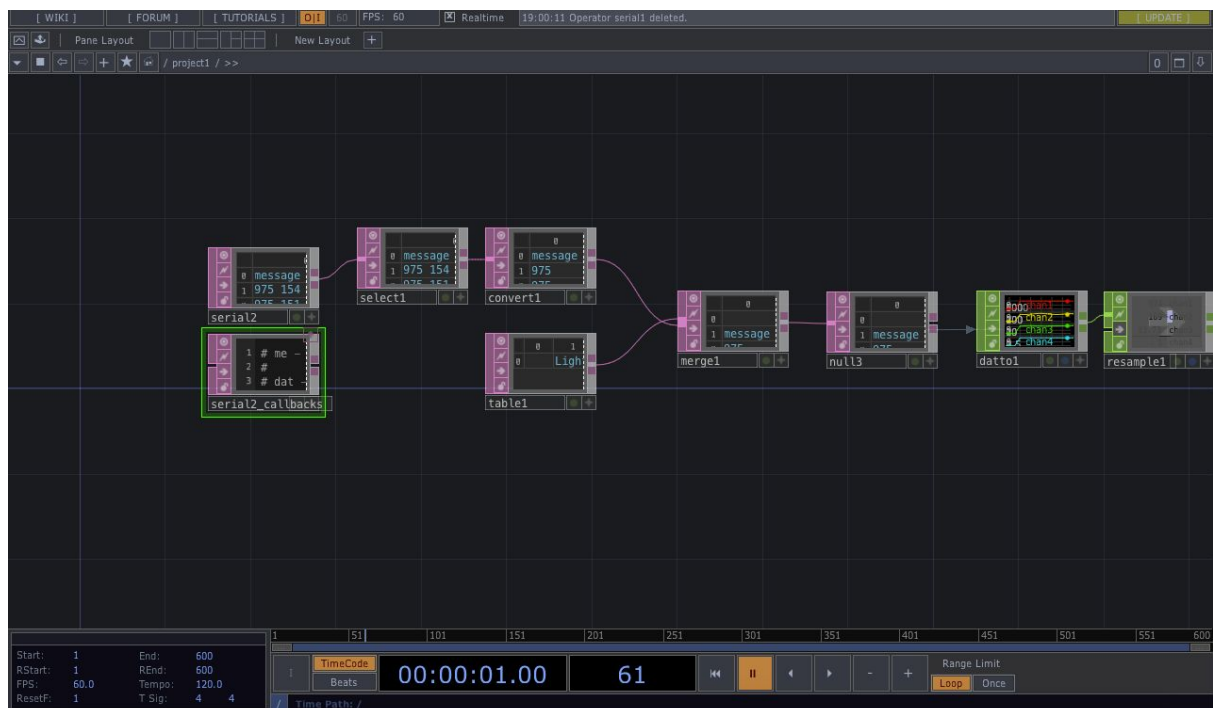
At this point the Data is ready to be used as 4 different thing in TouchDesigner. Each value gets separated to be able to act on its own. When the the information is separated it's time to turn the Data Operator in TouchDesigner to a Channel Operator (CHOP). With 4 different Select CHOPs I separate the 4 different values so that each one can be manipulated individually. Every one of the channels gets a Math CHOP, this is used to map the input values hower I desire. These 2 steps can be done countless times, so that for example I can have the Potentiometer control the x position of a 3D object from -2 to 2, but I can also using another Math CHOP, control the opacity of the same object, ranging from 0 to 1. After the Math CHOP I put a lag CHOP so that the motion is exponential instead of instantaneous. After that I merged the 4 different channels again with a Merge CHOP. After that a Trail CHOP just to see how the different values change after some time. With this CHOP the values are now ready to be exported to any parameter of the animation.

[illegible]

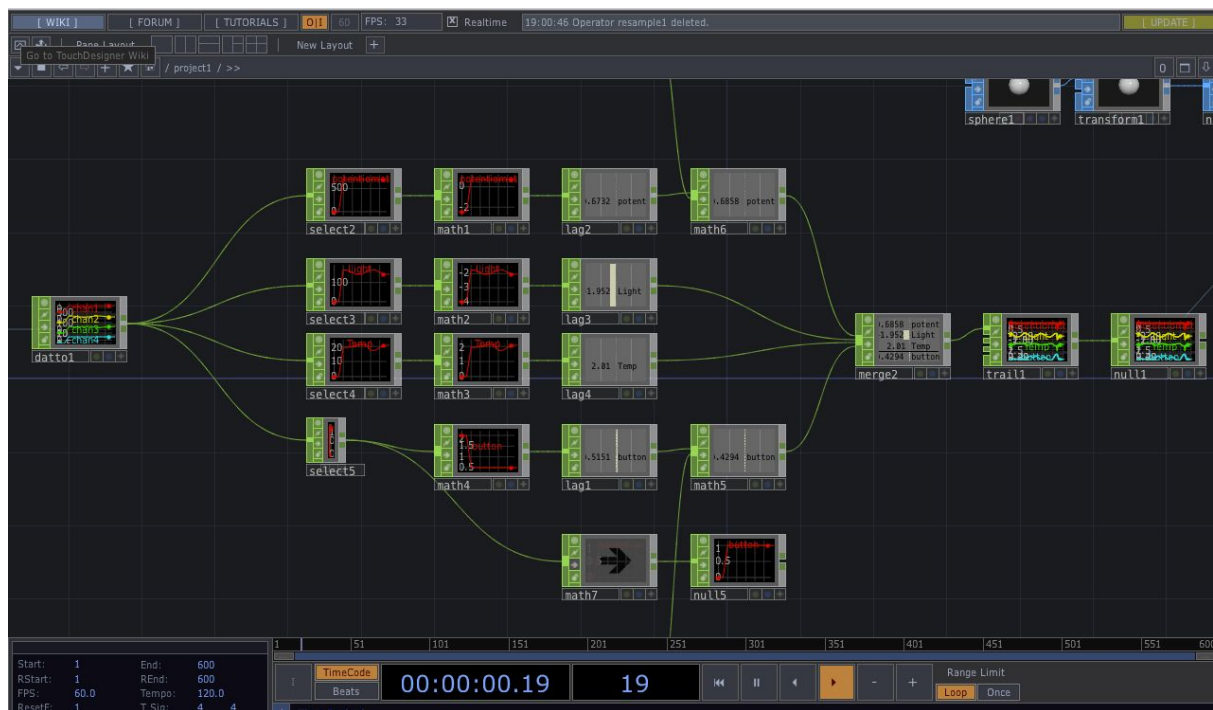
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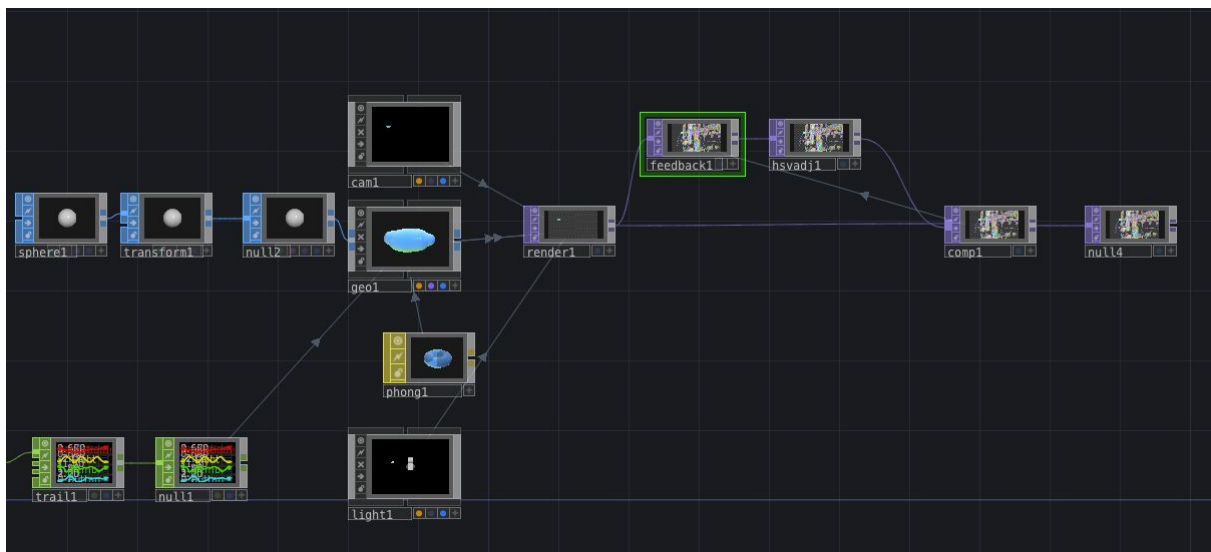
## Data Operators (DATs)



## Channel Operators (CHOPS)



## Animation



Parameters influenced by the Inputs:

I used the data to instance a simple piece of geometry (Sphere).

