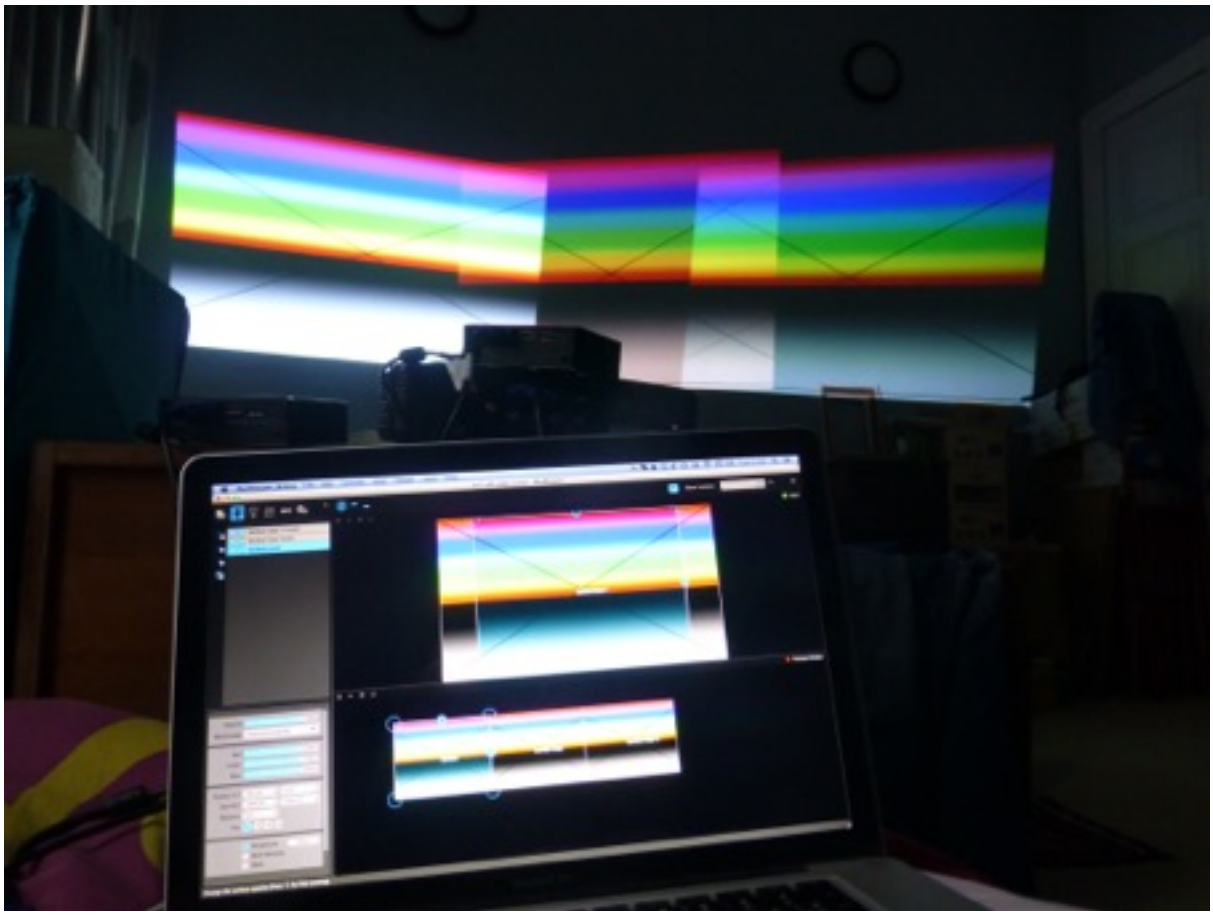
MadMapper Soft-Edge

In some software, to get soft-edge to work, you need to have your beamers exactly face to face with the projection area, and all projectors at the same distance, or at least, the surface covered by each projectors must be a rectangle of the same size and aligned with each other (can be adjusted with projector keystone etc)
In MadMapper we decided to do the soft-edge at the surface level (not in the projectors) for various reasons. First, it is simpler and more flexible. Second: MadMapper is a software that work in a 3D environment, not on a flat 2D surface, so doing the soft-edge at surface level is coherent (you can have a soft-edge between 2 surfaces placed in 2 different projectors, while having other surfaces on those projectors at other places, that don't ned soft-edge).
The implementation is very similar to Resolume.

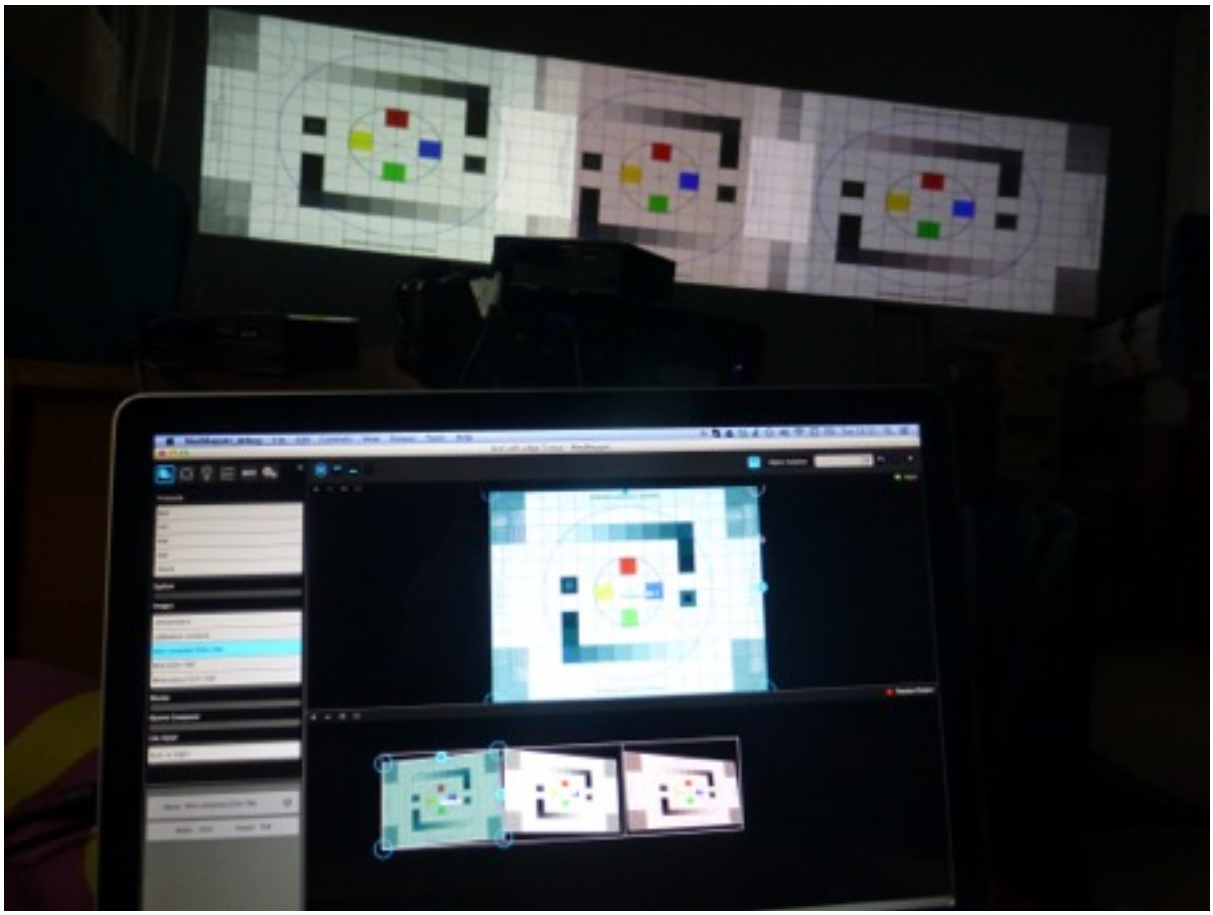
Steps to get the soft-edge setup correctly:

1- Connect projectors to cover the area you want to display

2- Create 3 surfaces, one on each projector, use the "color-calibration.jpg" image, and try to adjust brightness/contrast/gamma/color settings of each projector to get the same colors on all projectors.

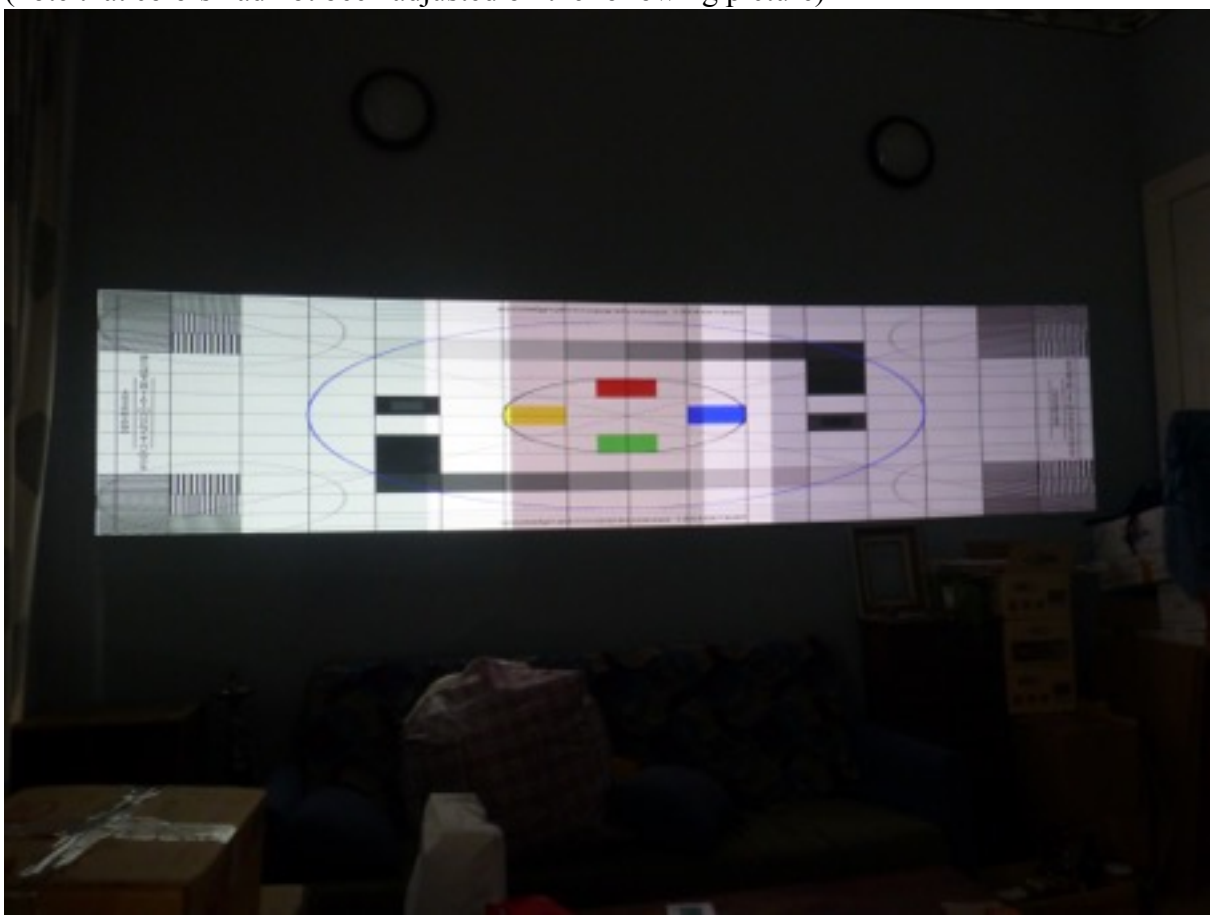


3- Create a flat and perfect rectangle with the surfaces you have put on each projector you want to use. They should be perfectly aligned and you should only use perspective if the projection surface is flat (soft-edge will work even if using mesh warping if done correctly, but on a flat surface we shouldn’t use mesh warping).

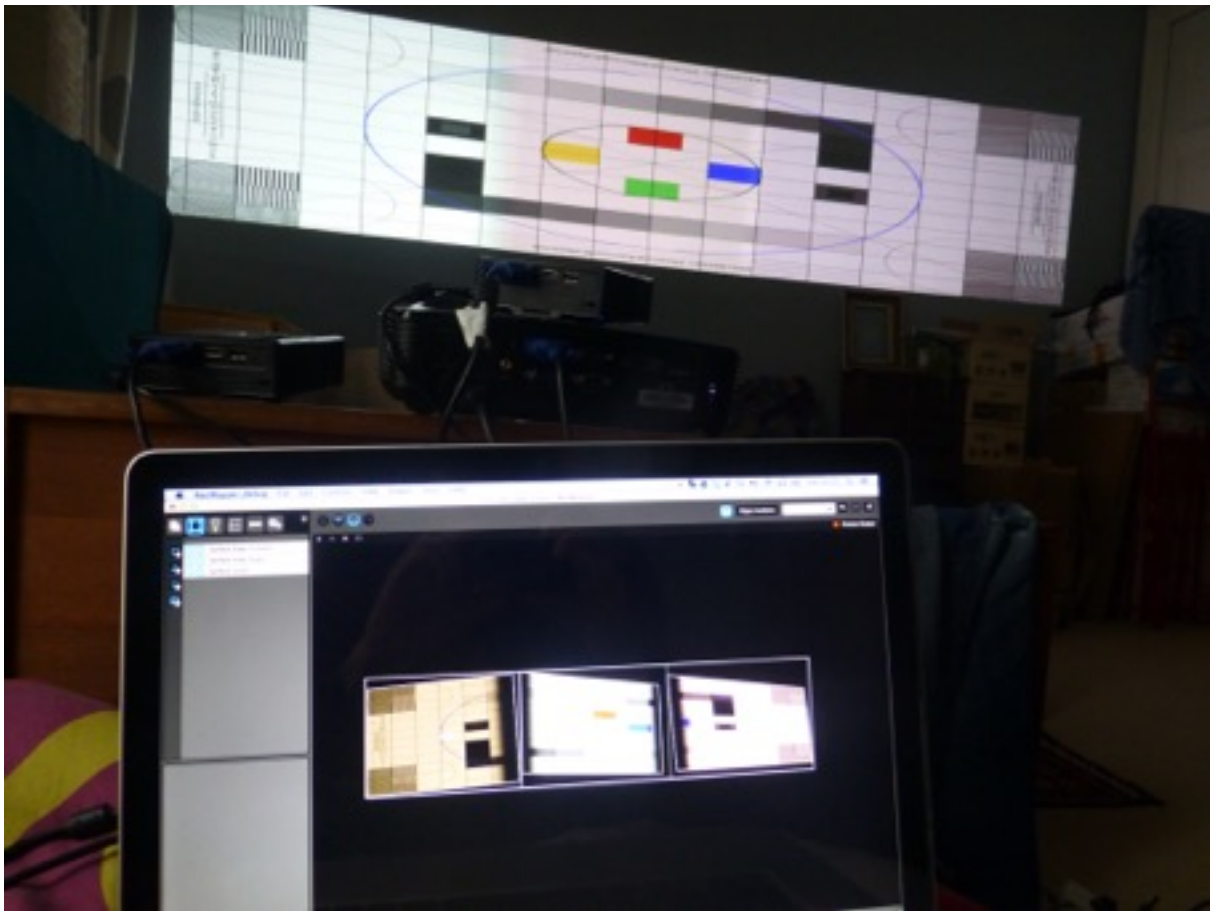


4- Adjust the surface input (UVs) to get the image complete and perfect on the output. This is the most complicated part. Use the image “uvs-calibration.jpg”.

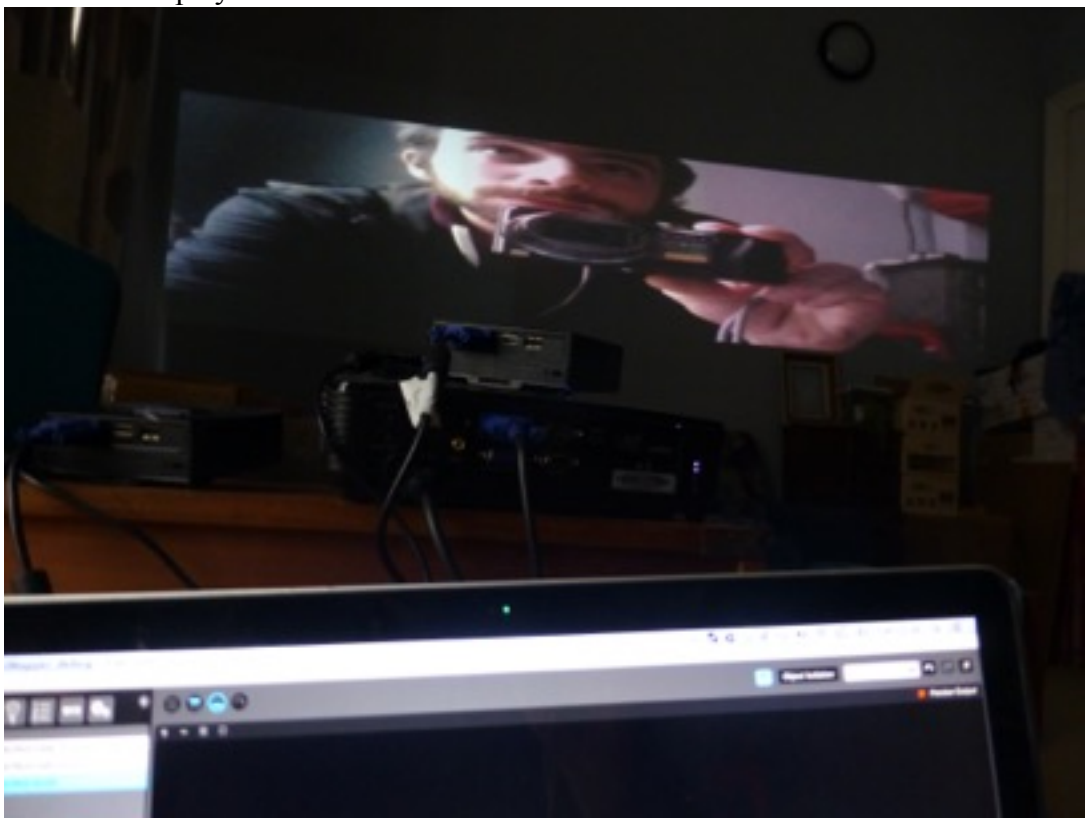
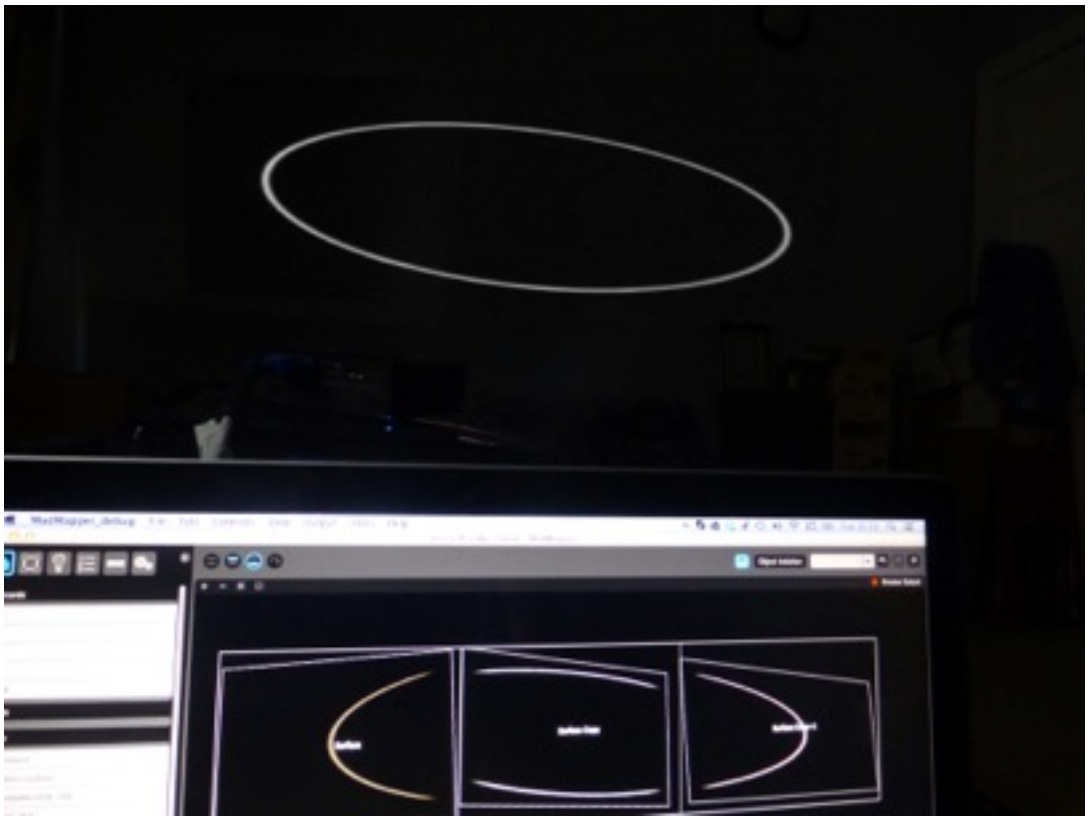
(note that colors had not been adjusted on the following picture)



5- Select all implied surfaces and at the bottom of the Surface parameters, click the button “Auto-Setup” next to “soft-edge”. It will setup the soft-edge settings according to the UVs of each surface (taking care of their disposition relative to each other).



6- Adjust the curve of the soft-edge and the gamma (default is 1.8). The formula was taken from here: http://paulbourke.net/texture_colour/edgeblend/

When using very different projectors it becomes very hard to get a proper result. We would need a shaders to filter the colors, before simply playing with RGB does not work, and the projector settings might not help… Other software donnot propose that anyway.

Then we can play with other visuals ☺