

# RBD – Destruction Breakdown

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RBD

# Description

This project is about creating destruction effects of tv screen smashing, technical parts mainly include RBD destruction, debris and dust.

\*Reference Link: <https://youtu.be/Uy74cMd2odg?si=1gyCR2uwgnTNM-eY>



still image

# Render

Renderer : Redshift

Avg. Render Time : 1.7 min / frame

Image Resolution : 1280 x 720

Number of Lights : 2 (Environment, and Sun Light)

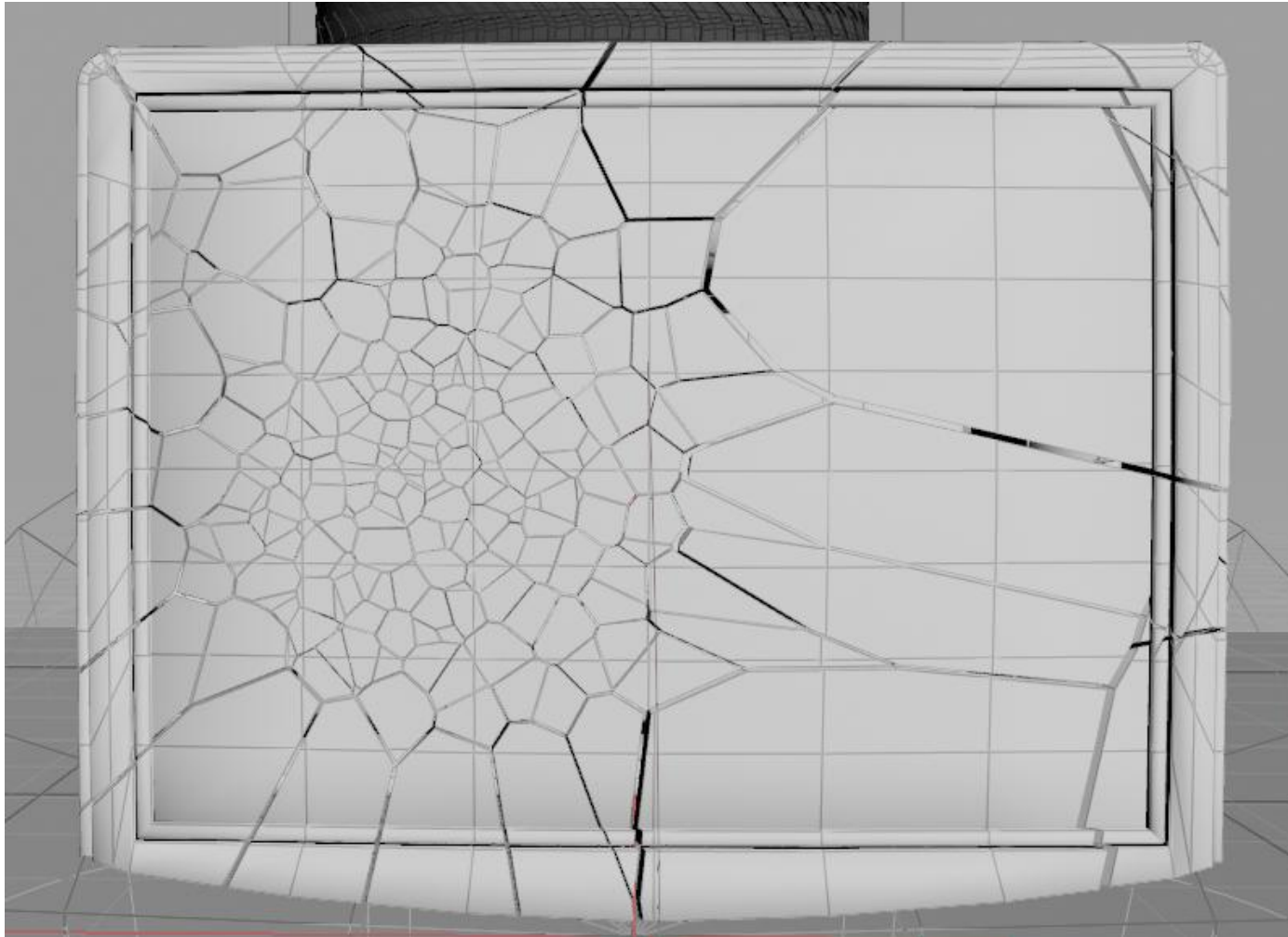
Settings:

Reflection: 4

Refraction: 6

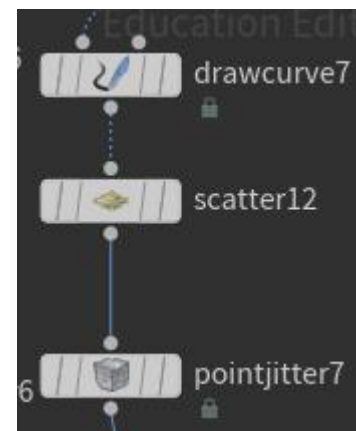
Volume: 1

# Breakdown - Constraints

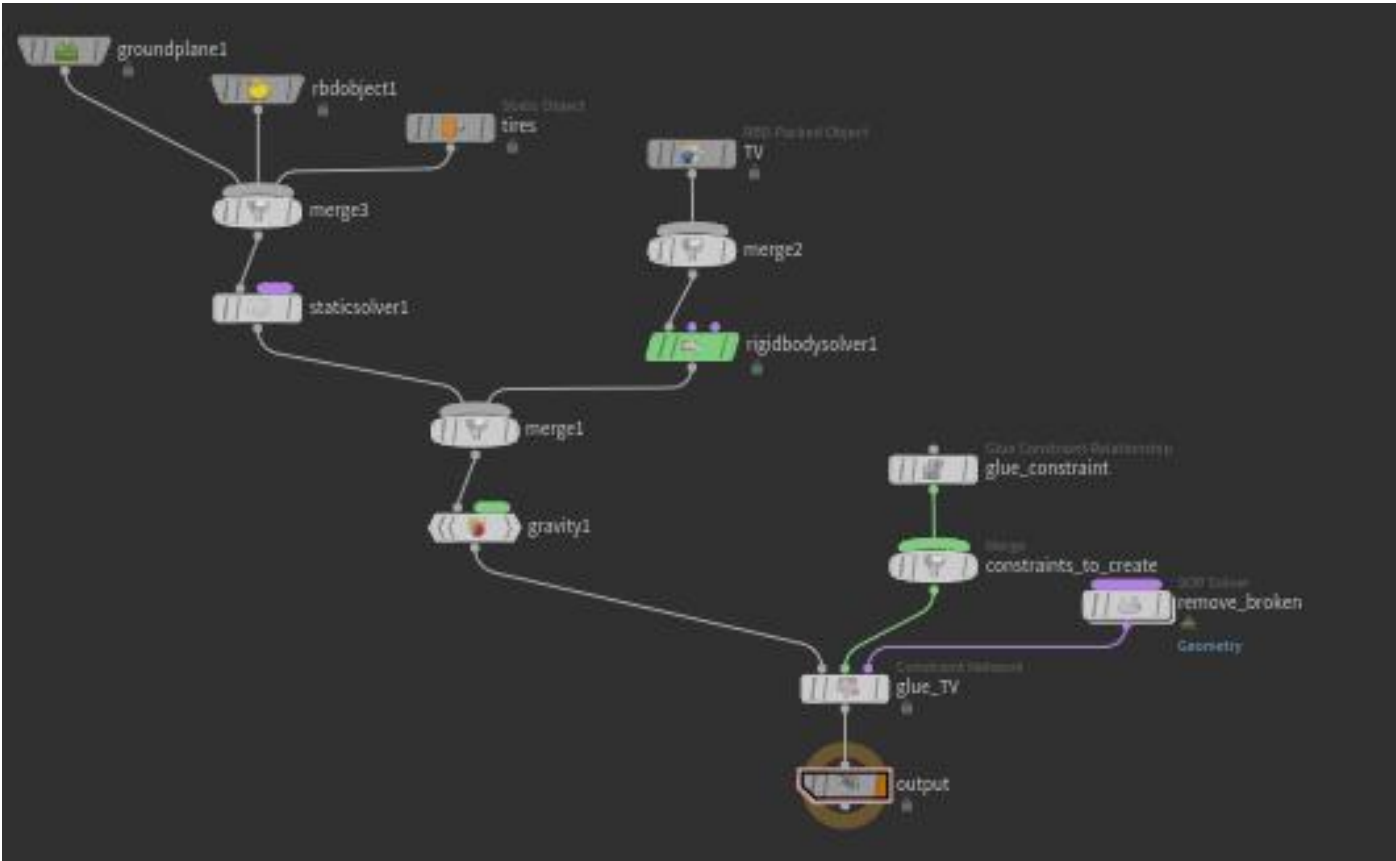


Constraints:

draw curve & voronoifracture

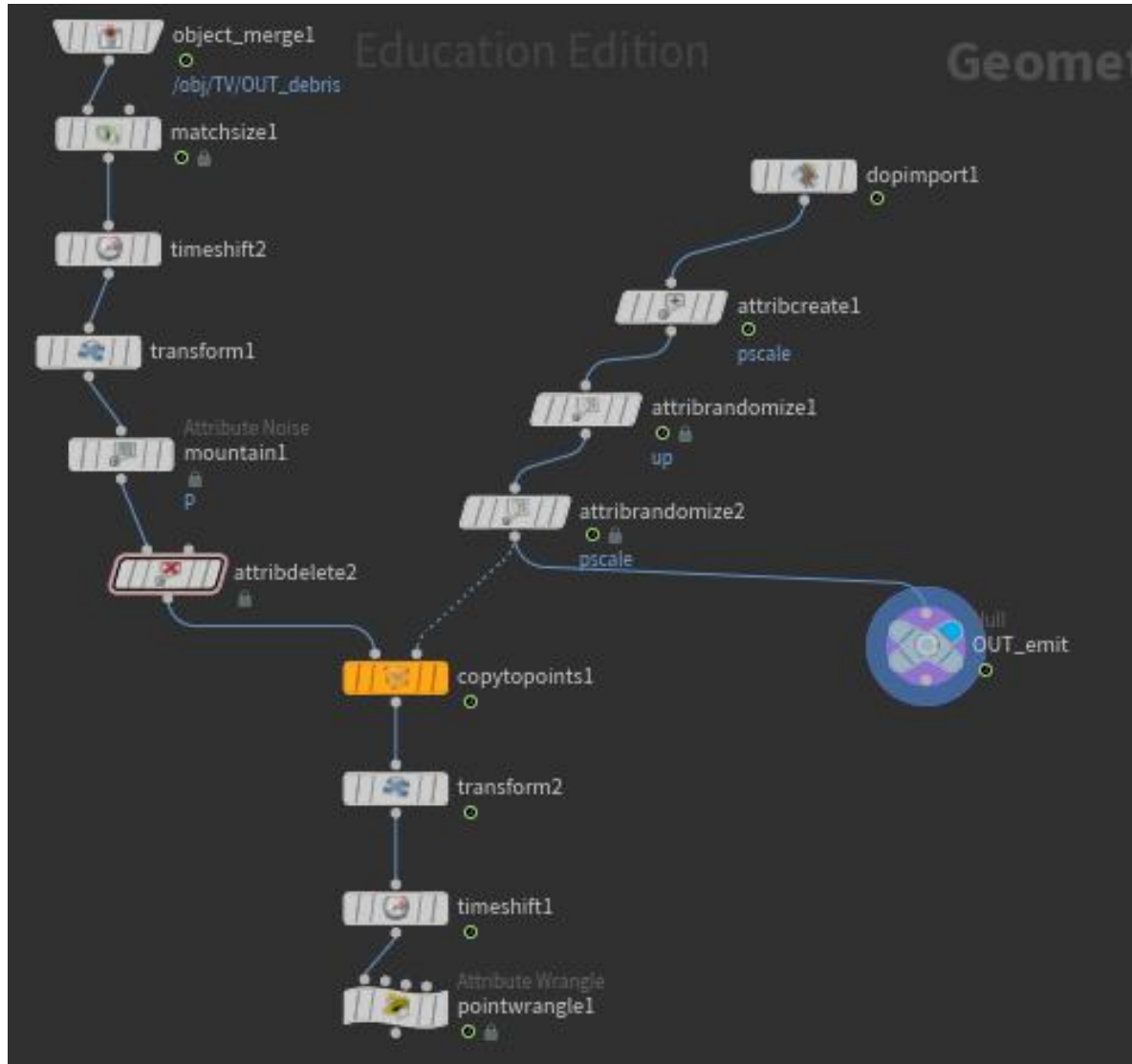


# Breakdown - RBD



For this description, I set animated brick as rbd object which connected into staticsolver, and set tv screen as RBD packed object. There was only one layer constraint in this dop network.

# Breakdown - Debris



I set one break piece as object which copied to all the simulated debris points. These points are used as emit pyro source later .

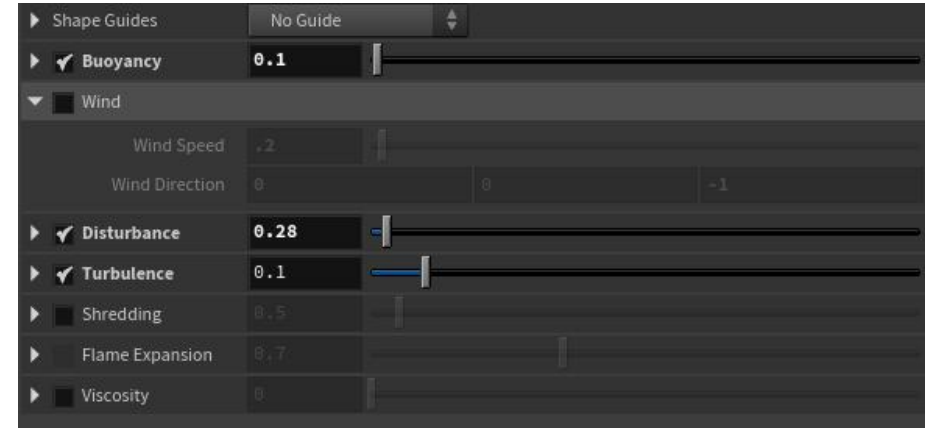
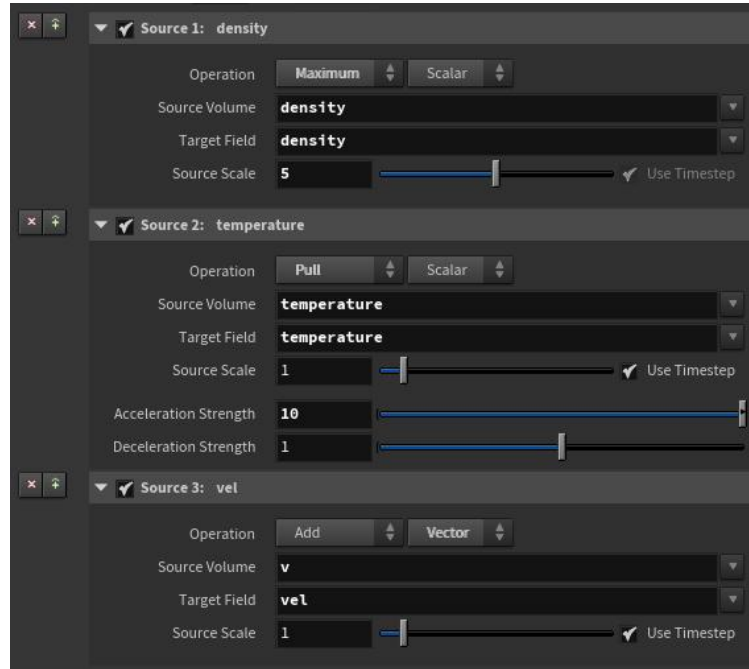
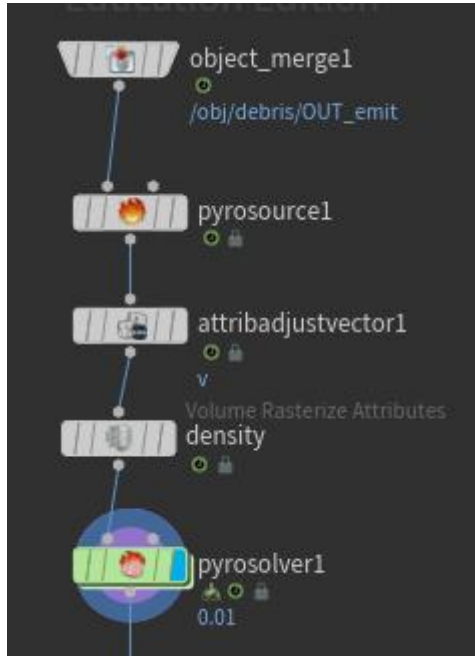
```
VEXpression  
1 vector ground = set(0, 0, 0); //  
2 if (@Frame > 24 && @P.y > ground.y)  
3 {  
4     removepoint(geoself(), @ptnum);  
5 }  
6  
7 if (@Frame > 24 && @P.z < ground.z)  
8 {  
9     removepoint(geoself(), @ptnum);  
10 }
```

Ln 1, Col 27

Attributes to Create \*

Enforce Prototypes

# Breakdown - Smoke/Pyro



For this pyro simulation, I set three attribute (density, temperature and velocity). Attribute adjust vector node was set to random the v value.

Density mode was set as “Maximum” mode which can prevent the growth of unlimited smoke density.

# Breakdown - Smoke/Pyro

```
VEXpression
1 if (@Frame > 10)
2 {
3     //
4     @v = set(0, 0.2, -0.2);
5 }
```

```
VEXpression
1 vector ground = set(0, 0, -0.1); //
2
3
4 if (@Frame > 10 && @P.z > ground.z)
5 {
6     removepoint(geoself(), @ptnum);
7 }
```

According to the reference, the velocity of dust is not consistently forward.

Over time, the velocity will increasingly point towards the negative Z-axis and positive Y-axis.