

Continuous Fractal Noise

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In this paper I generalize Self-Organizing Boolean Fractal Noise to the unit interval of real numbers.

To generalize Boolean Fractal Noise to the real unit interval, one can use the following algorithm:

```
mutation := 0.01      // Example, controls both mutation and depth resolution
```

```
count := map[ip][j] + map[i][jp] + map[im][j] + map[i][jm]
```

```
map[i][j] += mutation * (if random() > count / 4 { 1 } else { 0 } - map[i][j])
```

The lower mutation rate, the higher depth resolution, but this is traded with slower self-organization.

Boolean Fractal Noise is a special case of this algorithm where `mutation = 1`.