
Rethinking Codecity

David Moreno-Lumbreras and Jesús M. González-Barahona
Universidad Rey Juan Carlos & Bitergia

MadSESE'19

dmorenolumb at gmail dot com & dmoreno at bitergia dot com
jgb at gsync dot urjc dot com

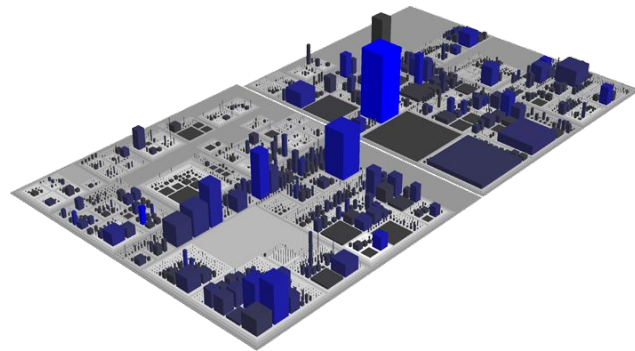
Content

Introduction

Current Research

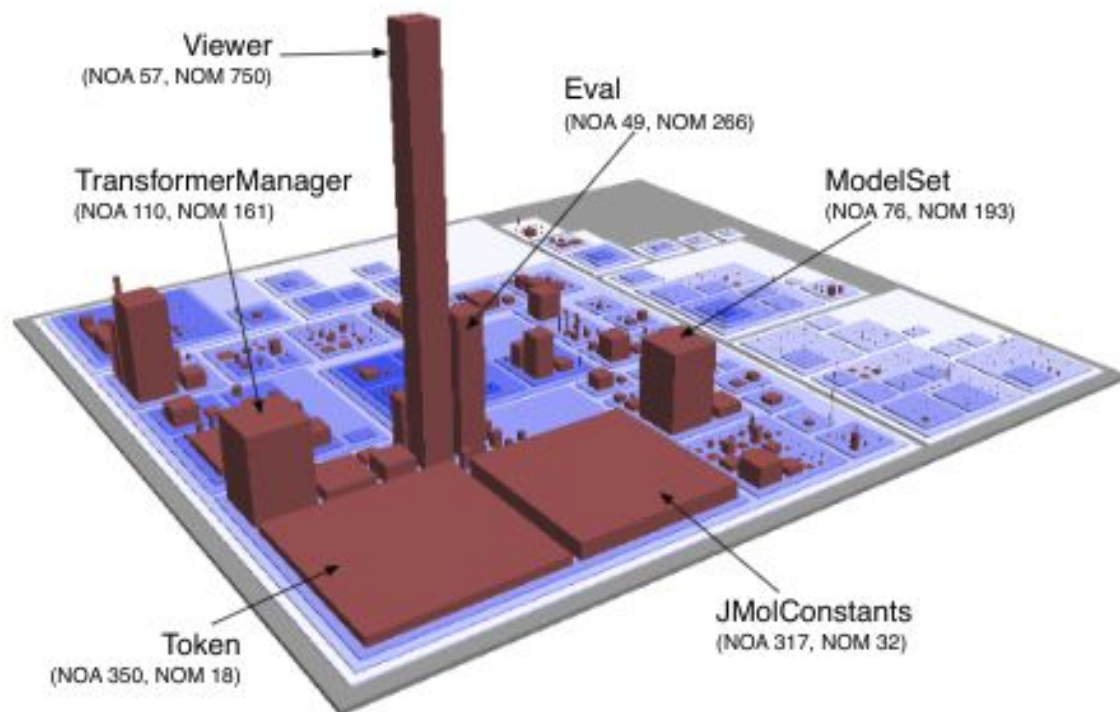
CodeCity:

1. OOB programs
2. Visualize code as city = city metaphor
 - a. Orientation
 - b. Location
 - c. Habitability



Metrics:

- Classes as buildings
- NOM (number of methods) is the height
- NOA (number of attributes) is the depth/width
- Color as package level



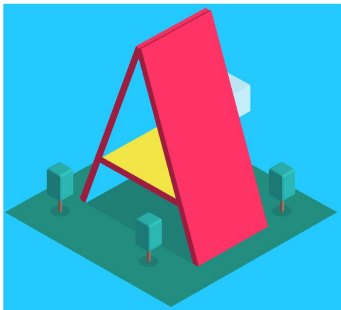
<https://wettel.github.io/codecity.html>

Codecity strongly bonded to analyze the program structure.

Non-fixed layout, city changes.

Interaction with VR

/ Introduction



```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<meta charset="utf-8">
```

```
<title>Hello, WebVR! • A-Frame</title>
```

```
<meta name="description" content="Hello, WebVR! • A-Frame">
```

```
<script src="https://aframe.io/releases/0.8.2/aframe.min.js"></script>
```

```
</head>
```

```
<body>
```

```
<a-scene background="color: #ECECEC">
```

```
<a-box position="-1 0.5 -3" rotation="0 45 0" color="#4CC3D9" shadow></a-box>
```

```
<a-sphere position="0 1.25 -5" radius="1.25" color="#EF2D5E" shadow></a-sphere>
```

```
<a-cylinder position="1 0.75 -3" radius="0.5" height="1.5"
```

```
color="#FFC65D" shadow></a-cylinder>
```

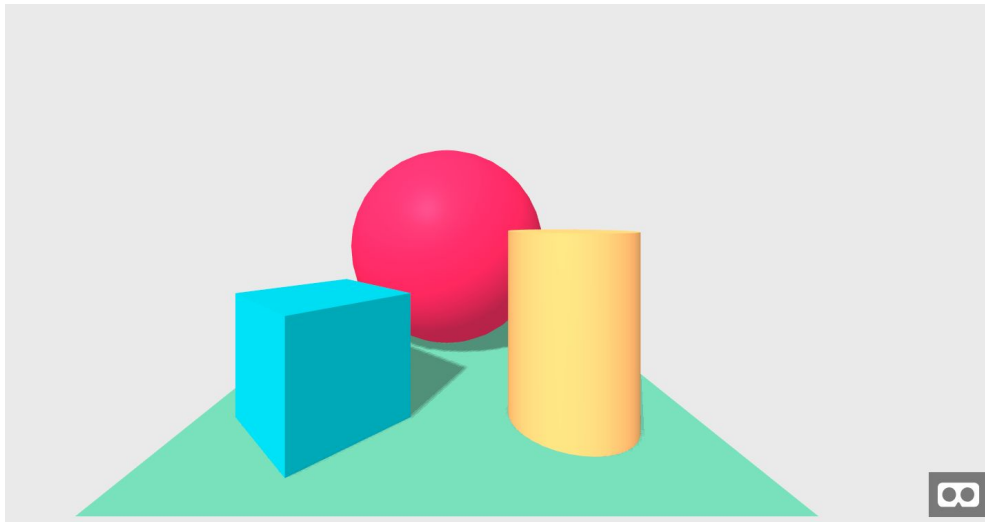
```
<a-plane position="0 0 -4" rotation="-90 0 0" width="4" height="4"
```

```
color="#7BC8A4" shadow></a-plane>
```

```
</a-scene>
```

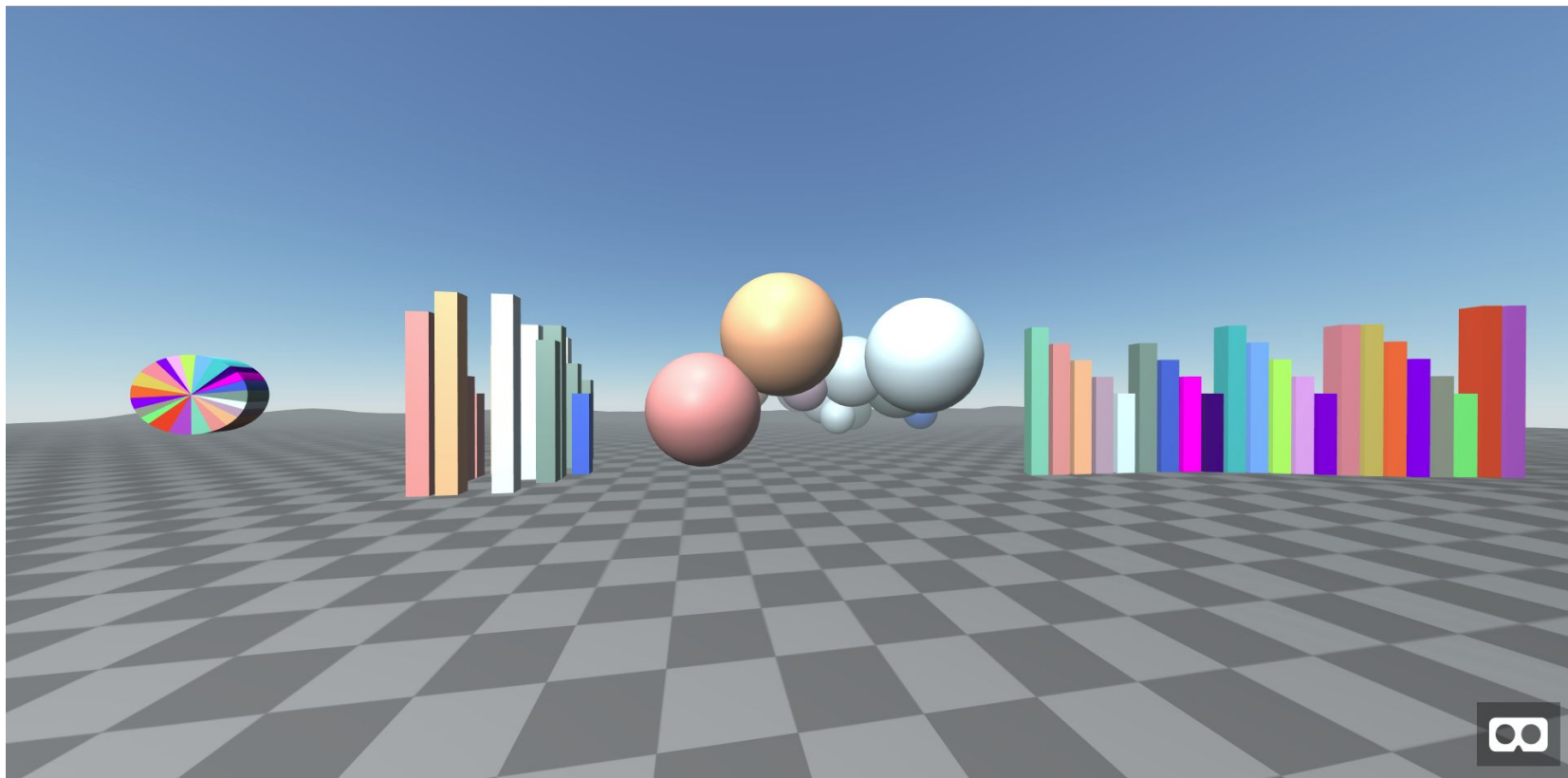
```
</body>
```

```
</html>
```

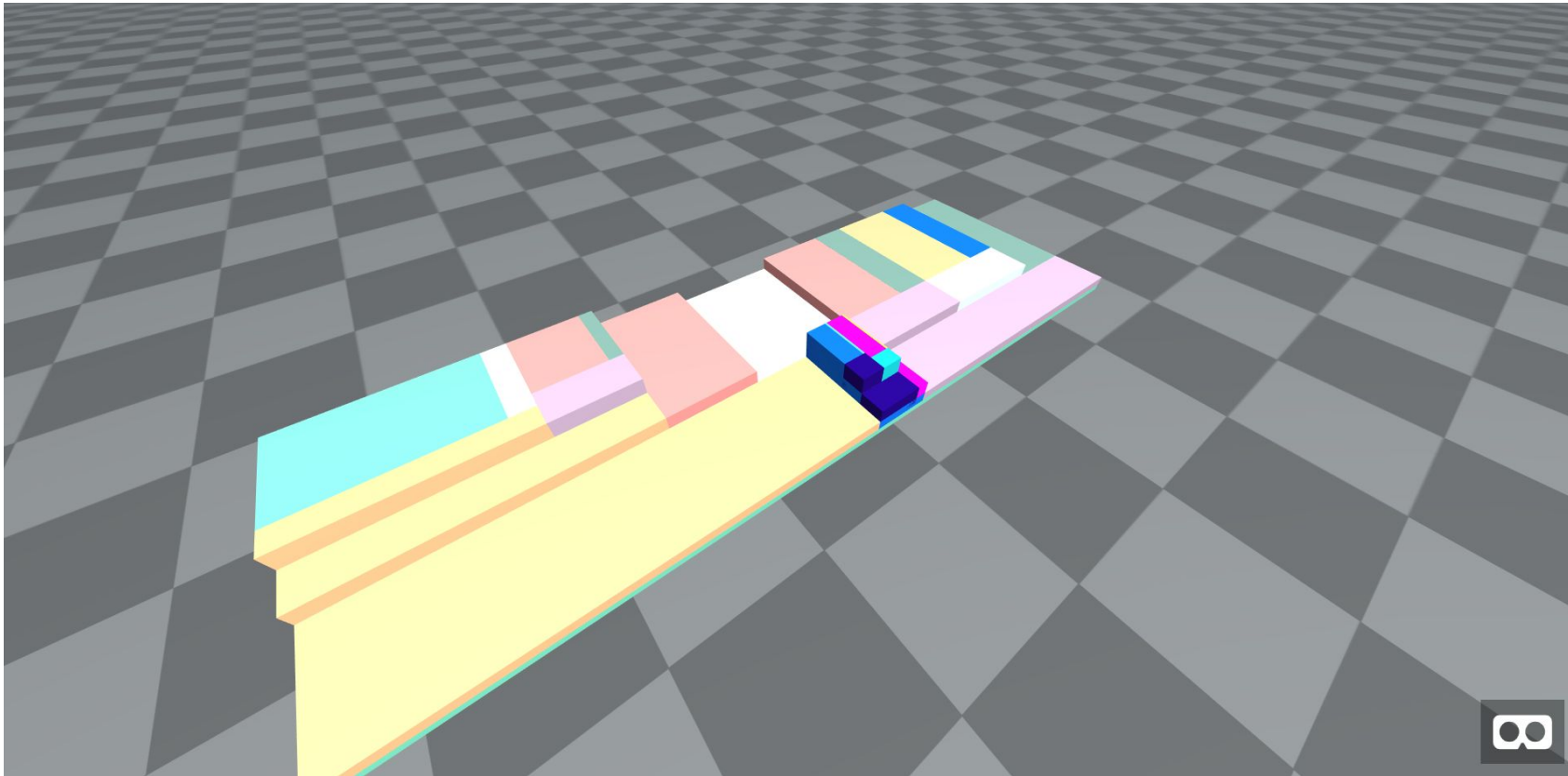


<https://aframe.io/>

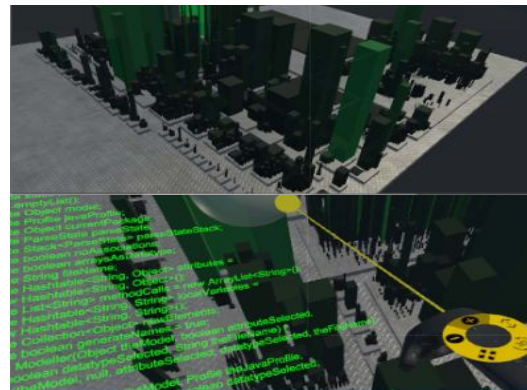




Reproduce Codecity with its original metrics - WIP



Reproduce other metrics that have been proposed by other researchers.



Reproduce Codecity with its original metrics - WIP

Reproduce other metrics that have been proposed by other researchers.

Use metrics further than OOB structure metrics

Reproduce Codecity with its original metrics - WIP

Reproduce other metrics that have been proposed by other researchers.

Use metrics further than OOB structure metrics

Extend the city metaphor fixing the layout, analyze time evolution... and why not other metaphors

—

**“How software
can be represented
in Virtual Reality?”**

—

**"Can this be
an entry point for a
Virtual Reality IDE?"**

–
"Can a
stakeholder/manager/dev
eloper learn the city of its
product/program,
and
can they analyze it with the
city?"

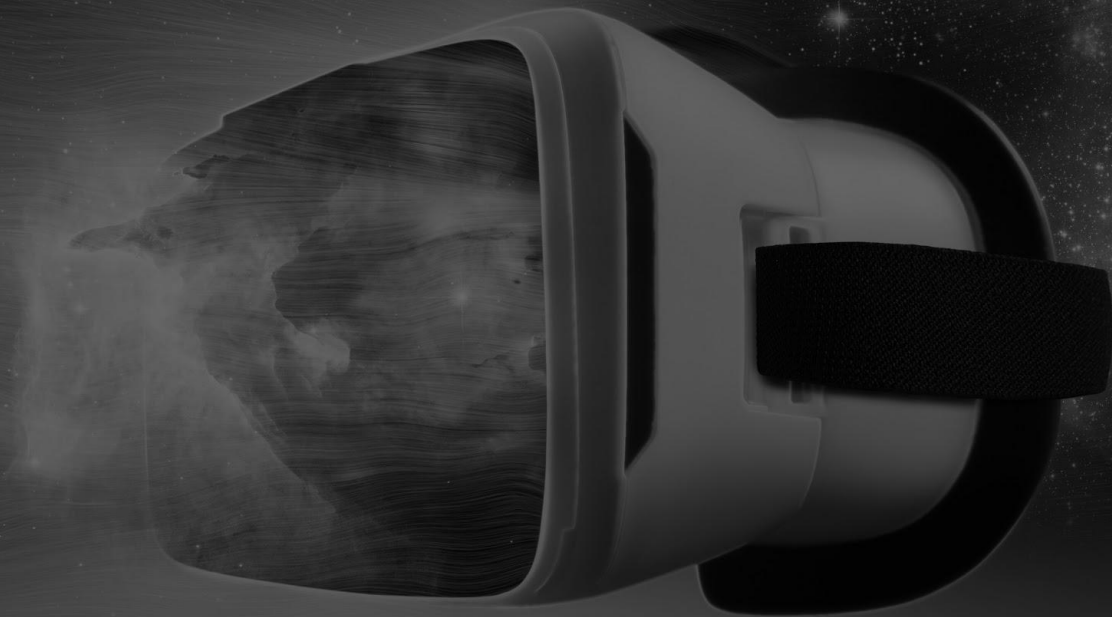
Thanks!

David Moreno

@dlumbrer1

dmoreno@bitergia.com

dmorenolumb@gmail.com



<https://dlumbrer.github.io/>