

Editor

Project

Circuit Zolder (spline)

Layers

	Name	
1	<input checked="" type="checkbox"/> Circuit Zolder (spline)	<input type="button" value="Delete"/>
2	<input checked="" type="checkbox"/> Polyline	<input type="button" value="Delete"/>

Properties

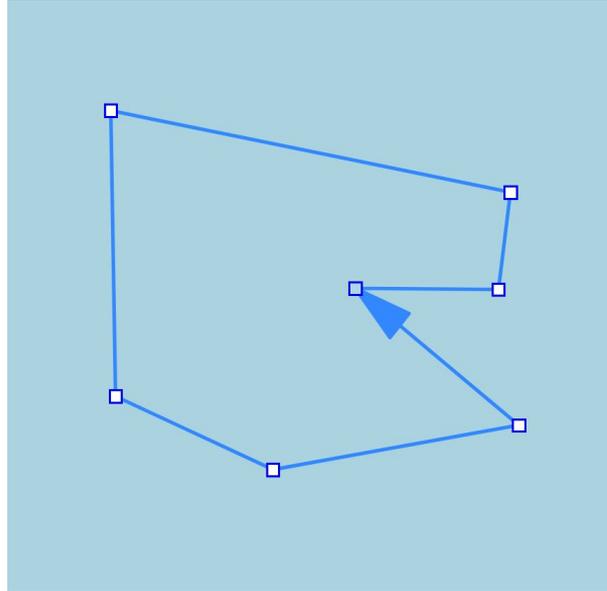
Name

Closed

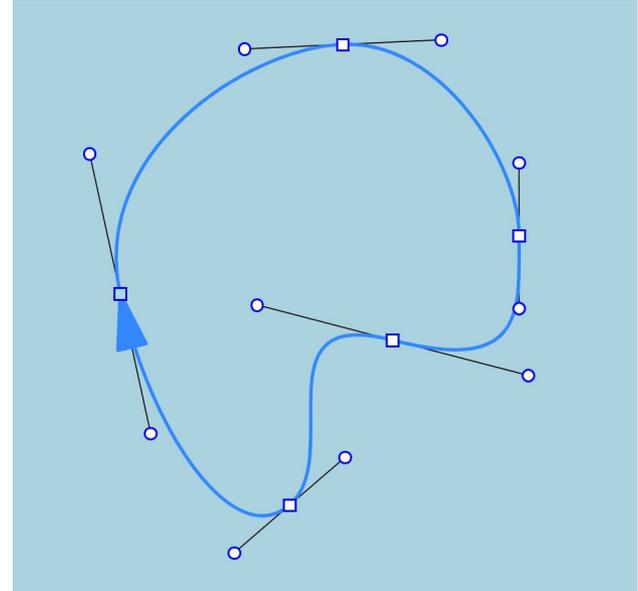
Layer ID: JzQgkveGI_UwhrK4NhDO

LODZ SOLAR TEAM Race Simulator Web-based Map Editor, version 2

Layer types



Polyline
Polygonal chain



Spline
Composite cubic Bézier curve
with C1 (velocity) continuity

Layer operations

Layers			
		Name	
1	<input checked="" type="checkbox"/>	Circuit Zolder	
2	<input checked="" type="checkbox"/>	Pit Lane	
3	<input type="checkbox"/>	Alternative route	

Properties	
Name	<input type="text" value="Polyline"/>
<input checked="" type="checkbox"/>	Closed

Polyline

Project management

Project

New

Open

Save

Export

Saving editor projects to disk and loading them back to the editor

Project File Structure

```
{
  "version": 1,
  "layers": [
    {
      "type": "spline",
      "packed": {
        "version": 1,
        "name": "Circuit Zolder (spline)",
        "spline": [
          {
            "p": [
              50.988819935841775,
              5.2551646158099174
            ],
            "h2": [
              50.988680961222585,
              5.254826992750169
            ],
            "h1": [
              50.988958910460966,
              5.255502238869666
            ]
          }
        ]
      },
      ...
    }
  ]
}
```

Layer export

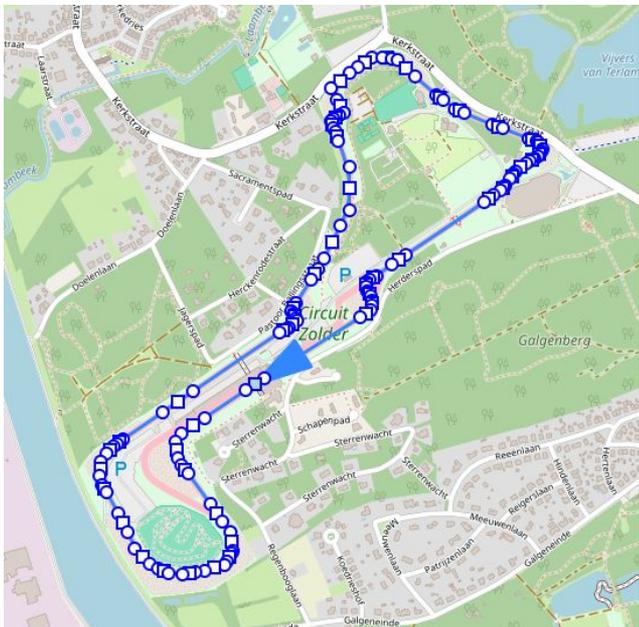


Exporting editor layers
to other applications for
further processing

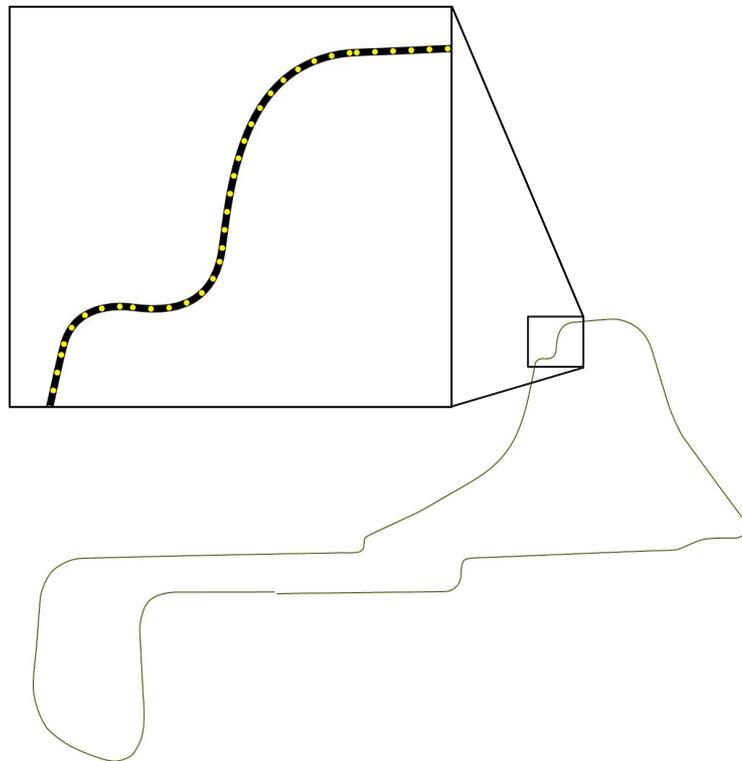
Track Export File Structure

```
{  
  "name": "Circuit Zolder (spline)",  
  "loop": true,  
  "sections": [  
    {  
      "distance": 1,  
      "curvature": 0.00033147392674317736,  
      "elevation_difference": 0.13605473844484806  
    },  
    {  
      "distance": 1,  
      "curvature": 0.0002615102766112013,  
      "elevation_difference": 0.12688691925065143  
    },  
    {  
      "distance": 1,  
      "curvature": 0.0002127054498687796,  
      "elevation_difference": 0.11947258339831279  
    },  
    ...  
  ]  
}
```

Layer export

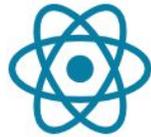


Editor Layer
(e.g. Bézier spline)



Multiarc
(length, radius, elevation)

Tech stack



React



Bun

TypeScript

VITE (⚡)

Future work

- More accurate spline export
- Predictable tools
- Improve navigation: search and set coordinates
- Alternative basemaps (e.g. satellite)
- Snap to map
- Visualisation of GPS traces
- Use to show data from the simulator and optimizer