

Faculty of Mathematics and Physics  
Charles University in Prague  
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# Graphics for Games

Lab 09.1 – UE<sub>4</sub> – LPV (UE<sub>4</sub> dynamic GI)

# Resources

## Links

- [UE4 LPV](#) – Epic's Light Propagation Volume
- [Example video 1](#)
- [Example video 2](#)
- [Post noting current GI techniques](#)
- [How to turn it on inside UE4](#)
- [Theory](#)

# Light Propagation Volume

## Steps

1. Enable the technique within `ConsoleVariables.ini`
2. Edit the file within `$UnrealEngineDIR\Engine\Config\ConsoleVariables.ini`
  - Must be done before you start the editor
3. Add  
`[Startup]`  
`r.LightPropagationVolume=1`

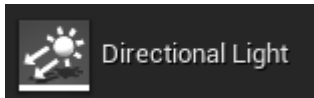
```
[Startup]
```

```
r.LightPropagationVolume=1
```

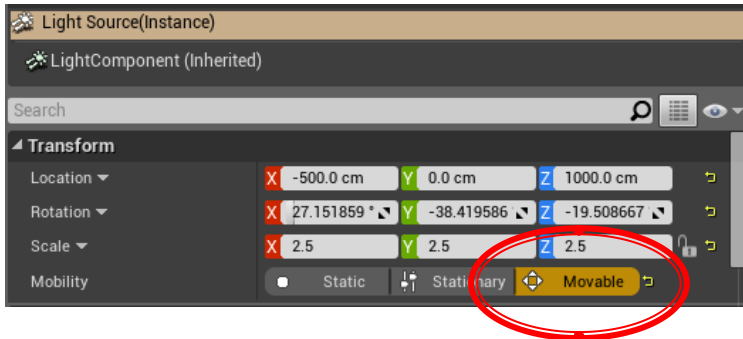
# Light Propagation Volume

## Steps

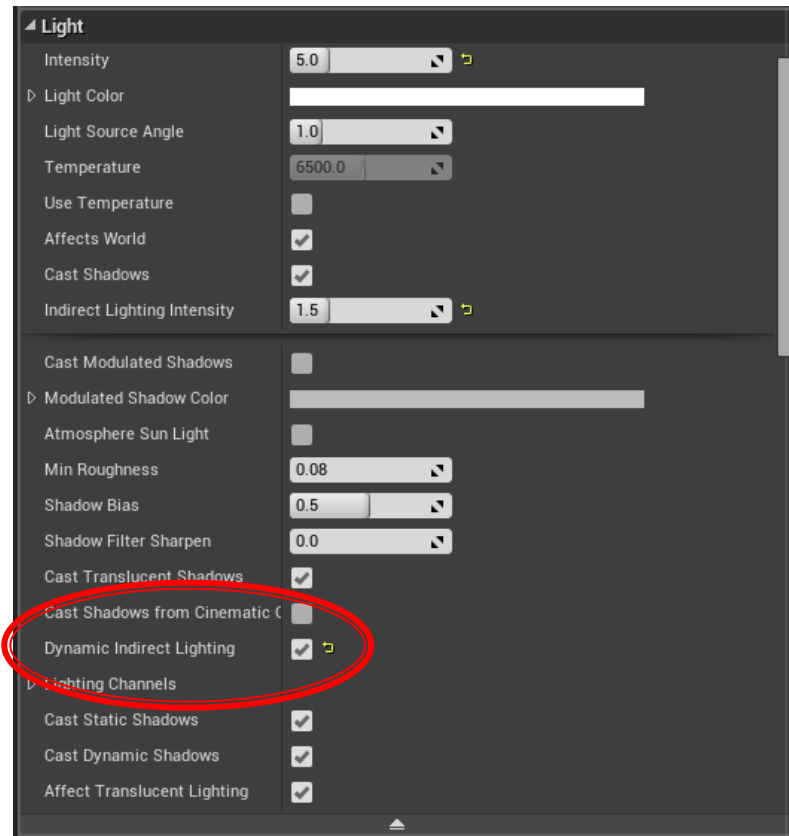
1. Add (edit) Directional light



2. Make it movable



3. Enable LPV



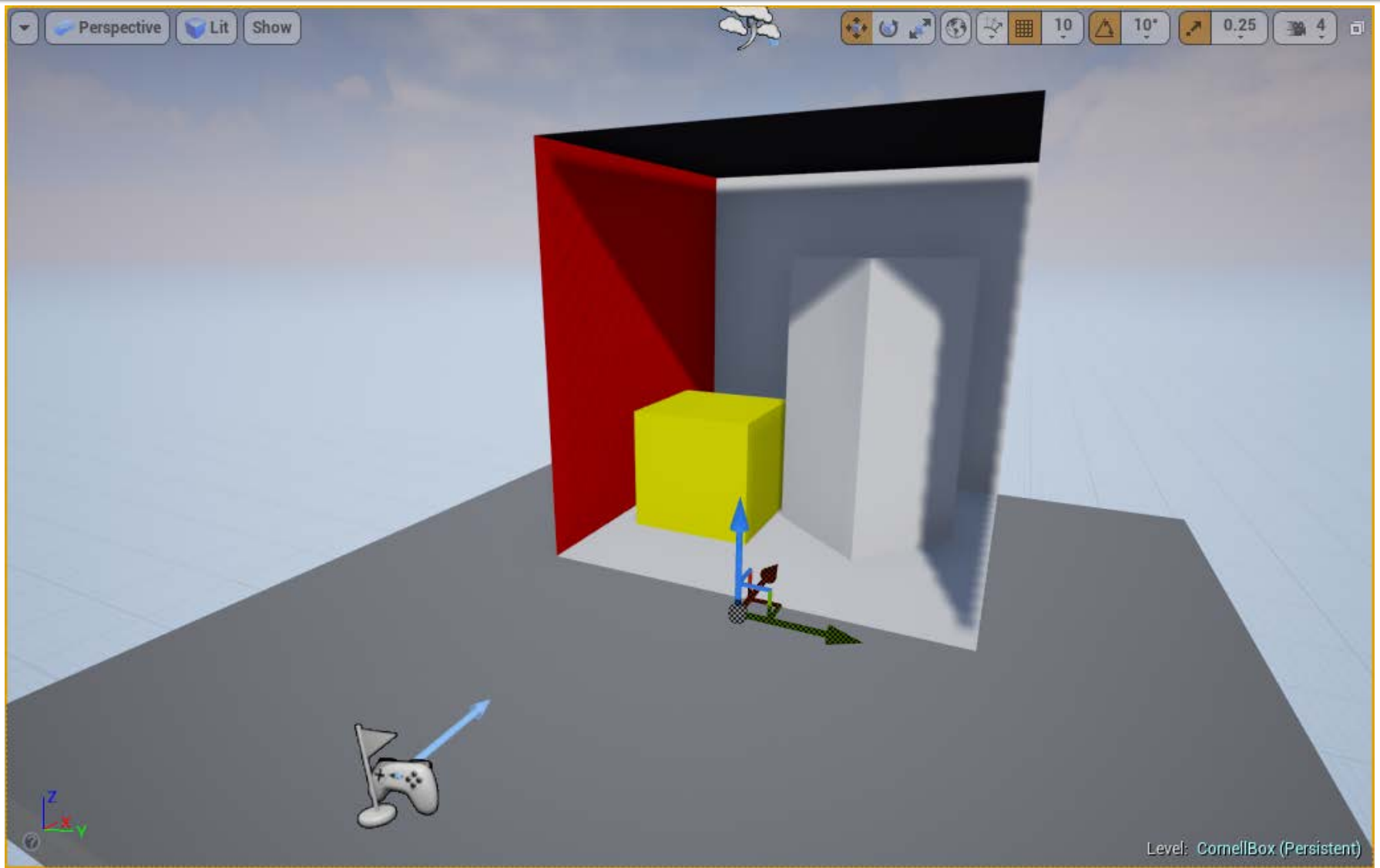
# Light Propagation Volume

## Example

- [CornellBox](#)
  - Contains two maps
  - Maps/CornellBox -> standard baked lighting
  - Maps/CornellBox-LPV -> enabled LPV
- Things to try
  - Move objects around in both maps to see the dynamic effect
  - Adjust LPV size and [other settings](#)

# Light Propagation Volume

## CornellBox



# Light Propagation Volume

## CornellBox-LPV

