



# EXAMPLE AUTOMOTIVE SIMULATION

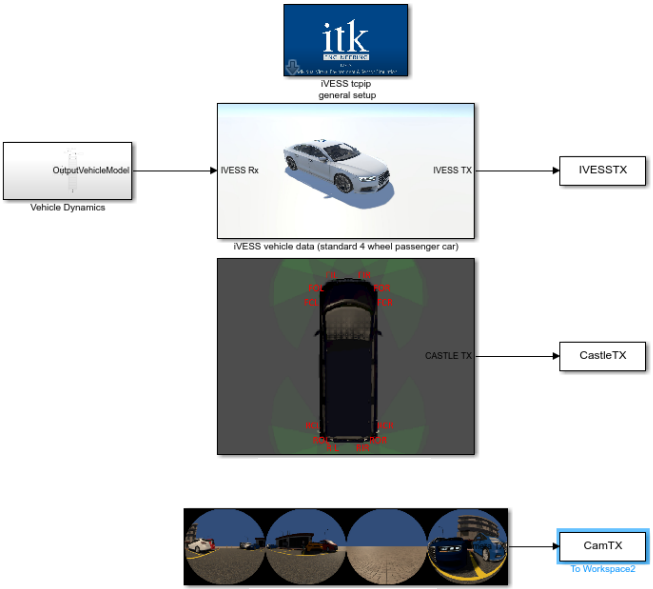
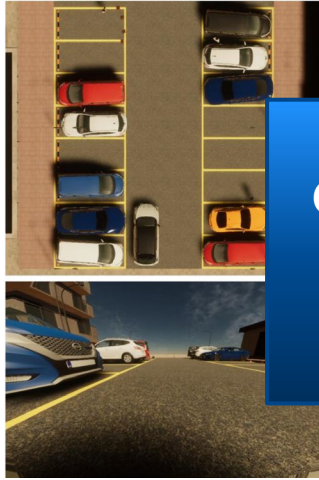
## ITK CUSTOM SOLUTION

# AUTOMOTIVE SIMULATION

## IVESS AND MIL

```

1 Example.json > ...
2 Thu, 14 days ago | 1 author (You)
3
4 "aisle": {
5   "length": 20.0,
6   "width": 7.0,
7   "roadMaterial": "ASPHALT"
8 },
9 "egoCar": {
10  "positionX": 2.0,
11  "positionY": -3.0,
12  "orientation": 30.0,
13  "vehicleSpeed": 1,
14  "maxMovingDistance": 5.0,
15  "maxSimulationTime": 10,
16  "lightOn": false,
17  "referenceSide": "LEFT",
18  "referenceSpotID": 1,
19  "takePicturesEachSecond": false
20 },
21 "leftParkingSegment": {
22  "slotLength": 6.0,
23  "slotWidth": 4.0,
24  "lineColor": "WHITE",
25  "parkingType": "PERPENDICULAR",
26  "staticObjects": [
27    {
28      "slotId": 1,
29      "positionX": -2.5,
30      "positionY": 0.0,
31      "orientation": 0.0,
32      "objectType": "CAR_STOPPER"
33    }
34  ]
35 }
36
37
38
39
40
41
42
  
```



### CHALLENGE

- Verification of an autonomous parking functionalities
- Co-Simulation of multiple sensor types and a vehicle plant model in a computer network or on cloud infrastructure

### SOLUTION

- Custom generation of country specific parking scenarios
- Ultrasonic simulation with raytracing and consistent image rendering with game engine
- Synchronized and unsynchronized connection of sensor and main-simulation

### BENEFIT

- Custom development environment for software fusion and perception
- No vendor-lock in and sprawling license costs
- Scale from *gray* to *whitebox*

# AUTOMOTIVE SIMULATION

## IVESS AND HiL

