

美团第三届
低空经济智能飞行管理挑战赛 性能赛
场景与用例说明

2025.09.01

1. 场景说明

场景中标识有坐标轴，坐标为(0,0)，绿色方向为 x 正，红色方向为 y 正，朝向以 x 轴正方向为 0 度，按照右手定则进行旋转。

场景图层中的网格单位为 1m，可用标志物会使用带标号的图标表示，标号与标志物映射参考下表，选手若有需要可以下载 images.tar

(https://s3plus.sankuai.com/udss-sim-data/result_25/download/images.tar) 获取小车视角标志物图片

标号	标志物
1	垃圾桶(trash)
2	长椅(bench)
3	广告牌(billboard)
4	树(tree)
5	拖车 tractor trailer)
6	汽油桶(barrel)
7	消防栓(fire hydrant)
8	雪糕筒(traffic cone)

2. 场景与用例库

场景一（简单场景）：

场景名称：‘Level01’



case 1 :

```
{  
  "scene_id": "Level01",  
  "reference_length": 11,  
  "timeout": 100.0,  
  "start_pose": [-4.5, 5.5, 0.0],  
  "goal": [6.5, 5.5],  
  "instruction": "move forward and stop at the tree"  
}
```

case 2:

```
{  
  "scene_id": "Level01",  
  "reference_length": 18.7,  
  "timeout": 100.0,  
  "start_pose": [-4.5, 5.5, 0.0],  
  "goal": [5.5, -3.2],  
  "instruction": "move forward to the tree, turn right, go straight and stop at the traffic cone"  
}
```

```
}
```

case 3:

```
{  
  "scene_id": "Level01",  
  "reference_length": 10,  
  "timeout": 100.0,  
  "start_pose": [0.0, 5.0, 0.0],  
  "goal": [-5.0, 10.0],  
  "instruction": "turn back, go straight to the tree, turn right, move until reach the bench"  
}
```

case 4:

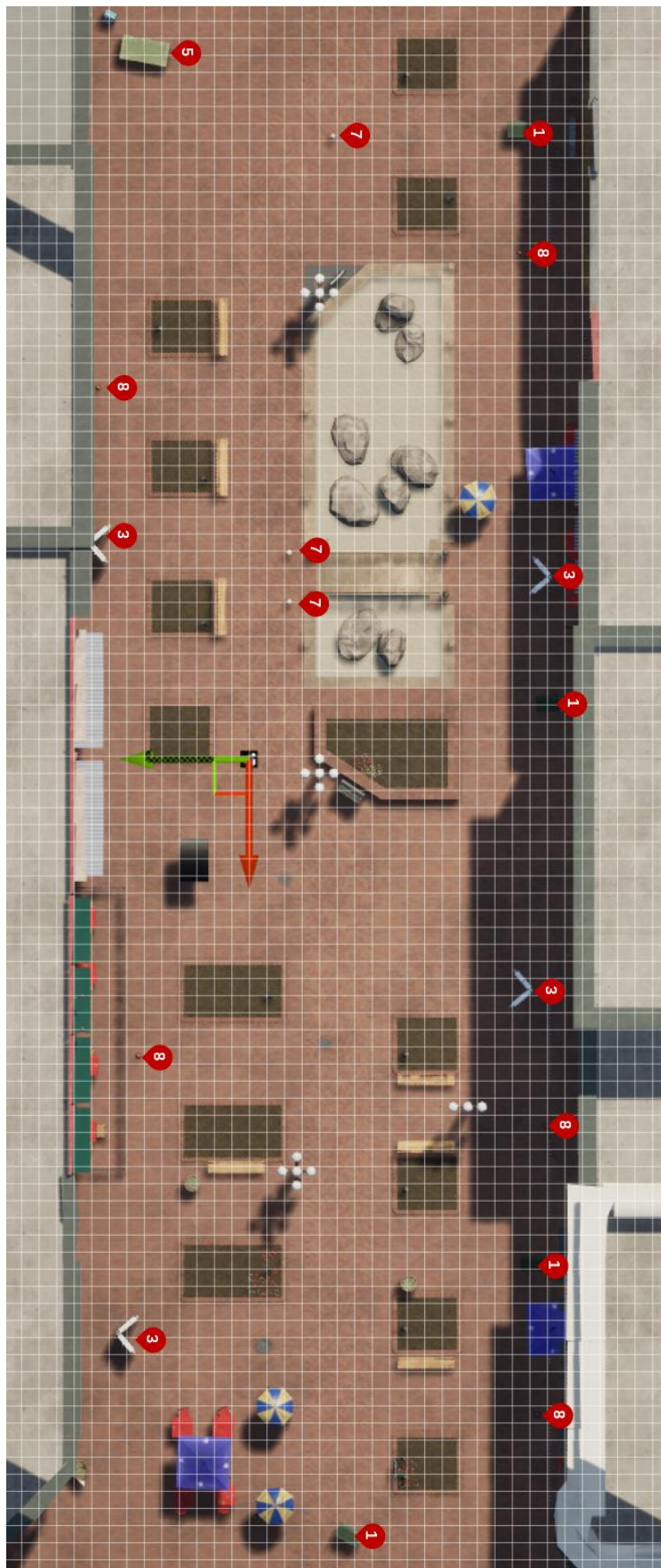
```
{  
  "scene_id": "Level01",  
  "reference_length": 5,  
  "timeout": 100.0,  
  "start_pose": [-5.0, 5.0, 3.1416],  
  "goal": [-5.0, 10.0],  
  "instruction": "head to your right hand side and go to the bench"  
}
```

case 5:

```
{  
  "scene_id": "Level01",  
  "reference_length": 18,  
  "timeout": 100.0,  
  "start_pose": [-4.0, 5.0, 3.1416],  
  "goal": [7.0, -2.0],  
  "instruction": "turn back, move forward to the tree, turn right, walk until you see a traffic cone"  
}
```

场景二（街道场景）：

场景名称：‘Street01’



case 1 :

```
{  
    "scene_id": "Street01",  
    "reference_length": 8.8,  
    "timeout": 100.0,  
    "start_pose": [-4.8, -38.5, 0.0],  
    "goal": [4.0, -38.5],  
    "instruction": "move forward to the tractor trailer"  
}
```

case 2:

```
{  
    "scene_id": "Street01",  
    "reference_length": 19,  
    "timeout": 100.0,  
    "start_pose": [-4.0, 12.0, 3.1416],  
    "goal": [-14.0, 21.0],  
    "instruction": "Walk straight to the billboard, turn right, and proceed until you reach a traffic cone"  
}
```

case 3:

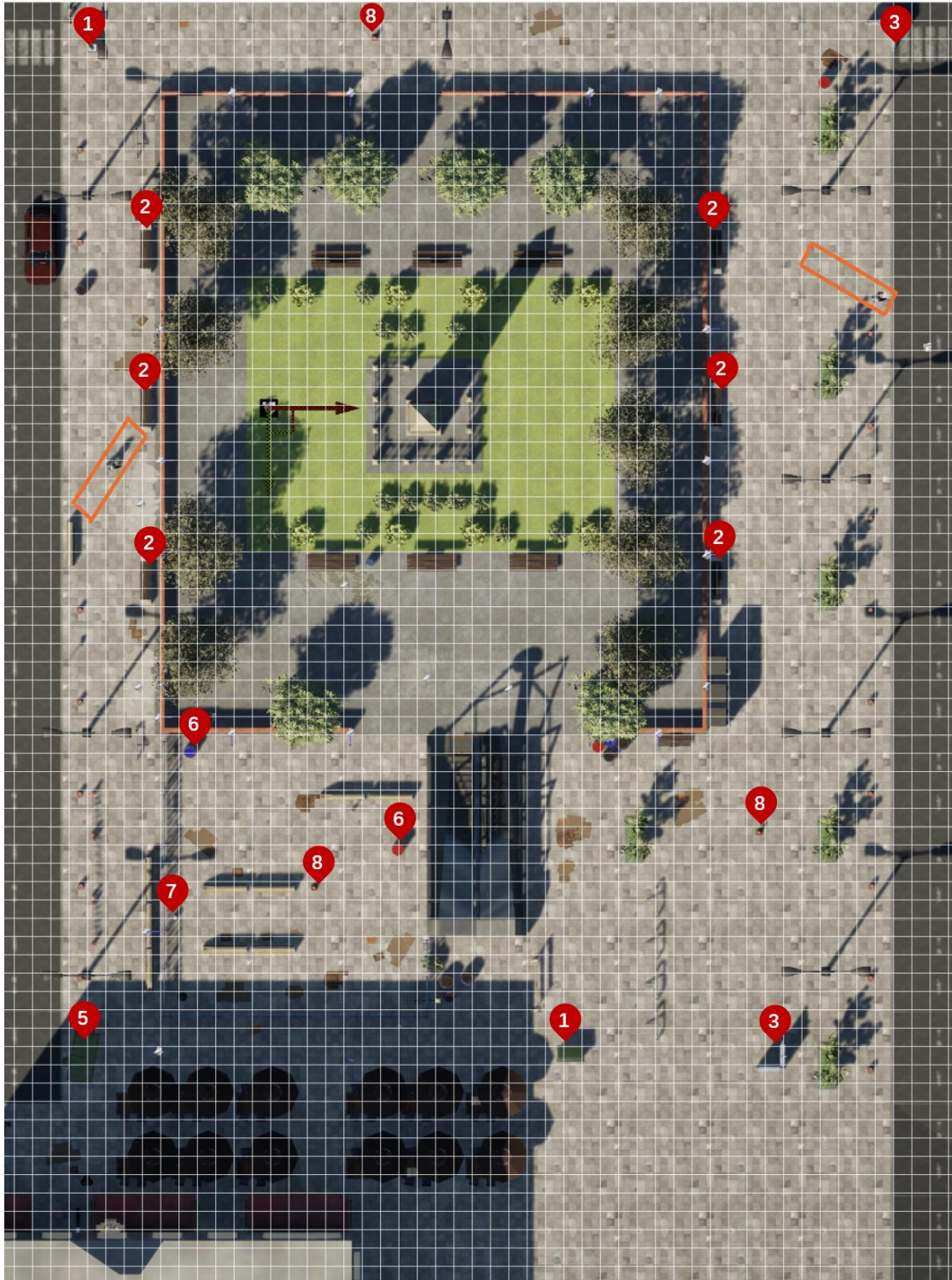
```
{  
    "scene_id": "Street01",  
    "reference_length": 16,  
    "timeout": 100.0,  
    "start_pose": [-4.0, 20.0, 3.1416],  
    "goal": [-12.0, 12.0],  
    "instruction": "Go straight ahead to the traffic cone, then turn left and continue to the billboard"  
}
```

case 4:

```
{  
    "scene_id": "Street01",  
    "reference_length": 25,  
    "timeout": 100.0,  
    "start_pose": [-4.0, 12.0, 1.5708],  
    "goal": [-14.0, -3.0],  
    "instruction": "Turn left, walk straight to the billboard, turn left again, then move straight to the trash"  
}
```


场景三（广场）：

场景名称：‘Square01’，场景中两个橙色矩形是行人的活动范围



case 1 :

```
{  
    "scene_id": "Square01",  
    "reference_length": 16,  
    "timeout": 100.0,  
    "start_pose": [19.0, 6.0, 0.0],  
}
```

```
    "goal": [25.0, -4.0],
    "instruction": "turn right, walk straight to the barrel, turn left and walk to the fire hydrant"
}
```

case 2 :

```
{
    "scene_id": "Square01",
    "reference_length": 37,
    "timeout":100.0,
    "start_pose": [-10.0, 5.0, 3.1416],
    "goal": [-19.0, 33.0],
    "instruction": "move forward to the traffic cone, turn right and continue to the billboard"
}
```

case 3 :

```
{
    "scene_id": "Square01",
    "reference_length": 42,
    "timeout":100.0,
    "start_pose": [-10.0, -11.0, 0.0],
    "goal": [32.0, -11.0],
    "instruction": "move forward to the tractor trailer"
}
```

case 4 :

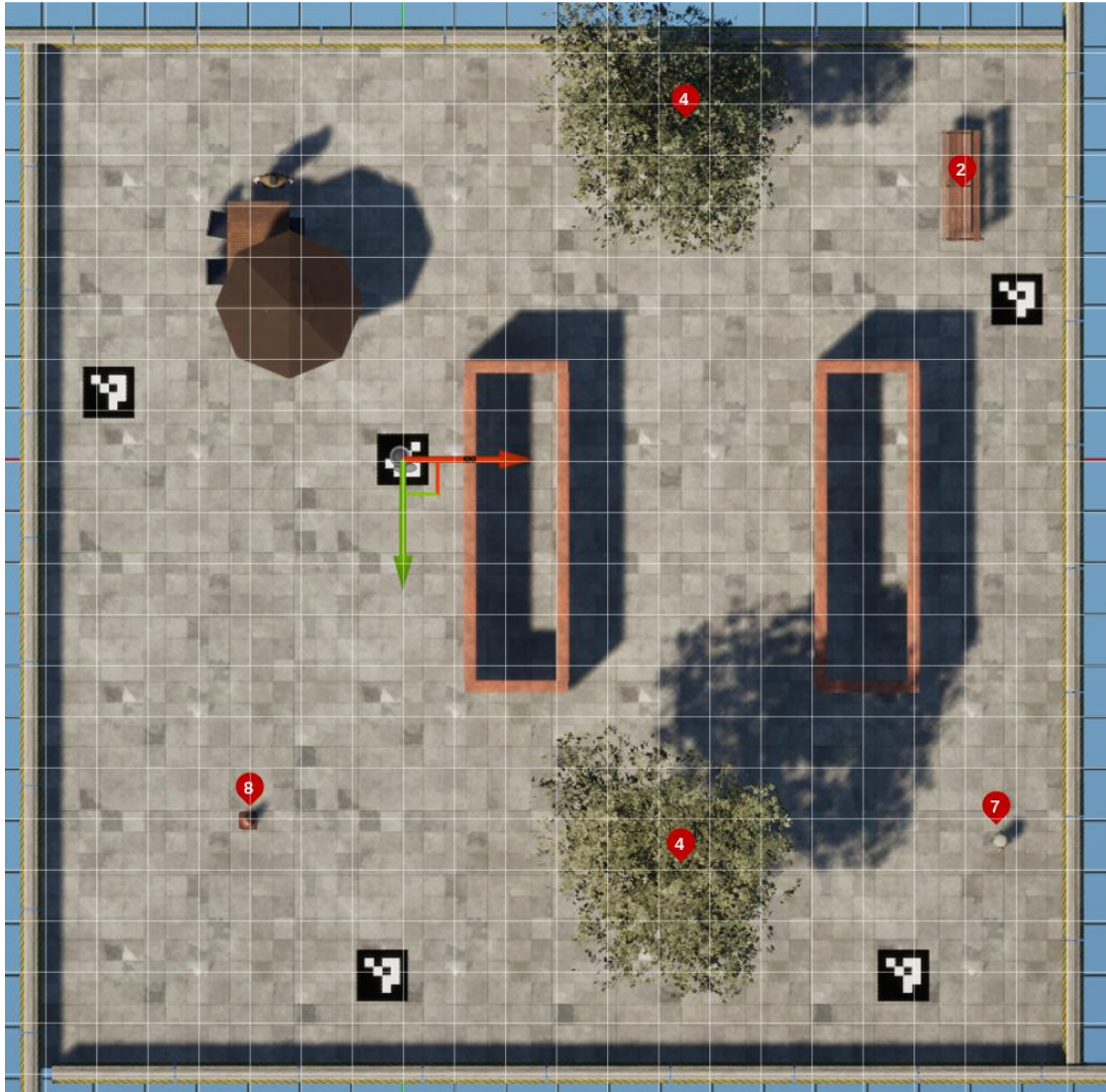
```
{
    "scene_id": "Square01",
    "reference_length": 7,
    "timeout":100.0,
    "start_pose": [23.0, 21.0, 1.5708],
    "goal": [23.0, 28.0],
    "instruction": "go forward to the tree"
}
```

case 5 :

```
{
    "scene_id": "Square01",
    "reference_length": 31,
    "timeout":200.0,
    "start_pose": [-19.0, 20.0, 1.5708],
    "goal": [23.0, 26.0],
    "instruction": "walk forward to the billboard, then turn right, bypass pedestrians and continue to the traffic cone"
}
```


场景四（多 marker 简单场景）：

场景名称：‘Level02’



case 1 :

```
{  
  "scene_id": "Level02",  
  "reference_length": 11,  
  "timeout": 100.0,  
  "start_pose": [-4.5, 5.5, 0.0],  
  "goal": [6.5, 5.5],  
  "instruction": "move forward and stop at the tree"  
}
```

case 2:

```
{  
  "scene_id": "Level02",  
  "reference_length": 18.7,  
  "timeout": 100.0,  
  "start_pose": [-4.5, 5.5, 0.0],
```

```
    "goal": [5.5, -3.2],  
    "instruction": "move forward to the tree, turn right, go straight and stop at the traffic cone"  
}
```

case 3:

```
{  
    "scene_id": "Level02",  
    "reference_length": 10,  
    "timeout": 100.0,  
    "start_pose": [0.0, 5.0, 0.0],  
    "goal": [-5.0, 10.0],  
    "instruction": "turn back, go straight to the tree, turn right, move until reach the bench"  
}
```

case 4:

```
{  
    "scene_id": "Level02",  
    "reference_length": 5,  
    "timeout": 100.0,  
    "start_pose": [-5.0, 5.0, 3.1416],  
    "goal": [-5.0, 10.0],  
    "instruction": "head to your right hand side and go to the bench"  
}
```

case 5:

```
{  
    "scene_id": "Level02",  
    "reference_length": 18,  
    "timeout": 100.0,  
    "start_pose": [-4.0, 5.0, 3.1416],  
    "goal": [7.0, -2.0],  
    "instruction": "turn back, move forward to the tree, turn right, walk until you see a traffic cone"  
}
```