**Unity3D脚本：坦克模型自动寻怪 自动追击**

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[**Unity3D**](http://www.unitymanual.com)教程**：**[**坦克大战中文系列教程**](http://www.unitymanual.com/565.html)

功能：

1.坦克自动旋转炮管，自动瞄准

2.在坦克的射程之内自动开炮

3.坦克自动向你追击

var Enemy\_tank: GameObject; //定义坦克

var firepoint: Transform; //定义开火点

var bullet: Rigidbody; //定义子弹

var bullspeed: int=50; //定义子弹速度

var attackRange = 100.0; //定义距离

var target : Transform;//定义共计目标

//static var value : float ;

private var cun\_time: int=0;

function Start () //初始化目标

{

if (target == null && GameObject.FindWithTag("hero")) target = GameObject.FindWithTag("hero").transform;

}

function Update ()

{

//Tank Fire

// cun\_time++;

// if(cun\_time==260)

// {

// var clone : Rigidbody;

// clone = Instantiate(bullet, firepoint.transform.position, firepoint.transform.rotation);

// clone.velocity = transform.TransformDirection (Vector3.right\*bullspeed);

// cun\_time=0;

// }

//distance from A and B

//angle from A and B

//var targetDir = transform.position-other.position;

//var right = transform.right;

//var angle = Vector3.Angle(targetDir, right);

//print("angle is ="+angle);//if (angle < 5.0)//transform.Rotate(Vector3.up\*0.5);

//var speed = 0.1;

//transform.rotation =Quaternion.Slerp (from.rotation, to.rotation, Time.time \* speed);

Enemy\_tank=GameObject.Find("Enemy\_barrel"); //实例化

if (target == null)

return;

if (!CanSeeTarget ())

return;

// Rotate towards target

var targetPoint = target.position;

var targetRotation = Quaternion.LookRotation (targetPoint - Enemy\_tank.transform.position,Vector3.up); //求出与目标之间的角度

Enemy\_tank.transform.rotation = Quaternion.Slerp(Enemy\_tank.transform.rotation, targetRotation, Time.deltaTime \* 2.0); //旋转之角度与目标对齐

//If we are almost rotated towards target - fire one clip of ammo

var forward = Enemy\_tank.transform.TransformDirection(Vector3.forward);

var targetDir =Enemy\_tank.transform.position-target.position; //求出2者之间的距离

if((Vector3.Angle(forward, targetDir) <10.0)||((Vector3.Angle(forward, targetDir) >-10.0))) //这边是自动开炮的效果

{

cun\_time++;

if(cun\_time==260)

{

var clone : Rigidbody;

clone = Instantiate(bullet, firepoint.transform.position, firepoint.transform.rotation);

clone.velocity = Enemy\_tank.transform.TransformDirection (Vector3.forward\*bullspeed);

cun\_time=0;

}

}

if((Vector3.Distance(transform.position, target.position) < attackRange)) //发现目标而且在范围之内，开始追击目标 { var targetPoint1 = target.position; //Calculation the angle with target var targetRotation1 = Quaternion.LookRotation (targetPoint1 - transform.position,Vector3.up); //Rotated Itself then make a line with target transform.rotation = Quaternion.Slerp(transform.rotation, targetRotation1, Time.deltaTime \* 1.0); transform.Translate(Vector3.forward\*0.05); } } function CanSeeTarget (): System.Boolean //计算是否被发现 { if (Vector3.Distance(transform.position, target.position) > attackRange) return false;

var hit : RaycastHit; if (Physics.Linecast (transform.position, target.position, hit))

return hit.transform == target; return false;

}