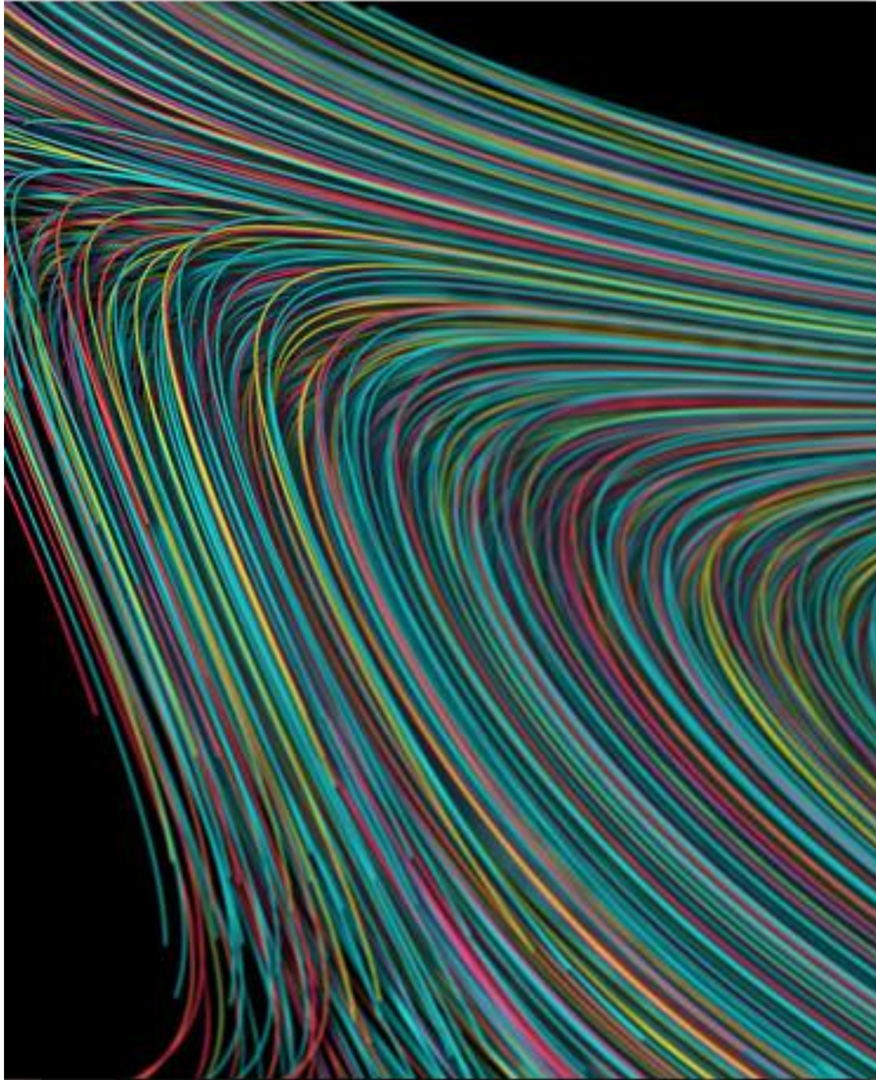
unity

Sébastien Poivre

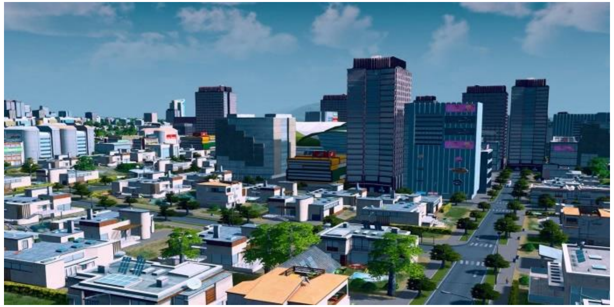


Main game engines

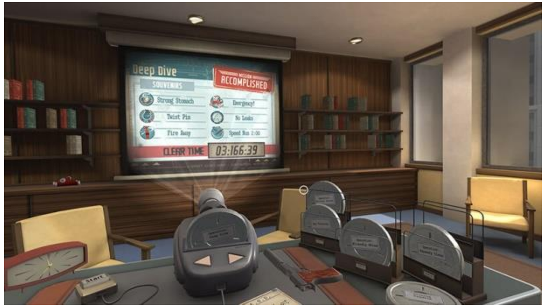
rendering / animations / physic engine / audio / lightning / …

Unity Capabilities

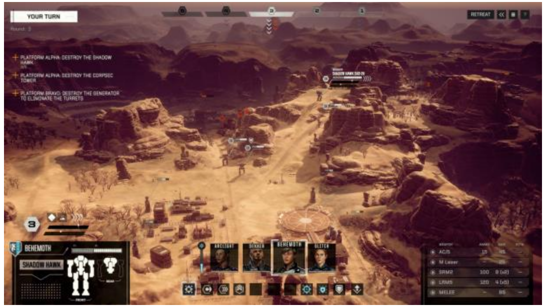
3D games



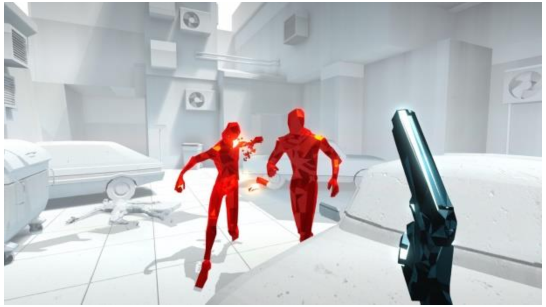
Cities: Skyline



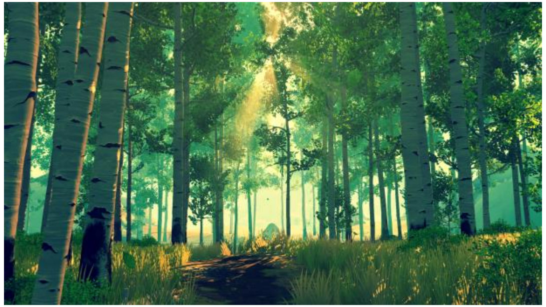
I Expect you to die



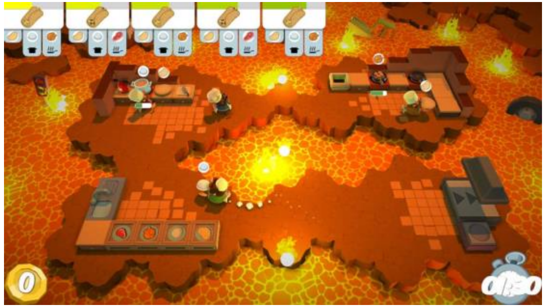
Battletech



Superhot

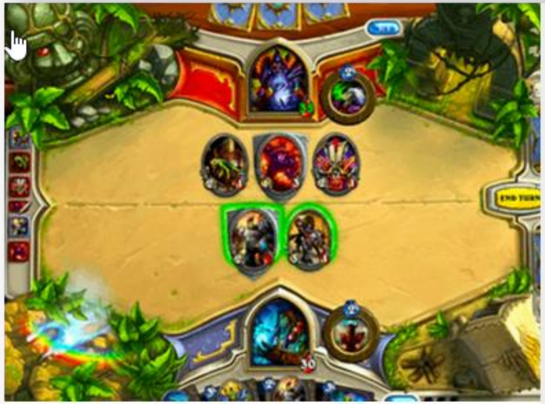


Firewatch

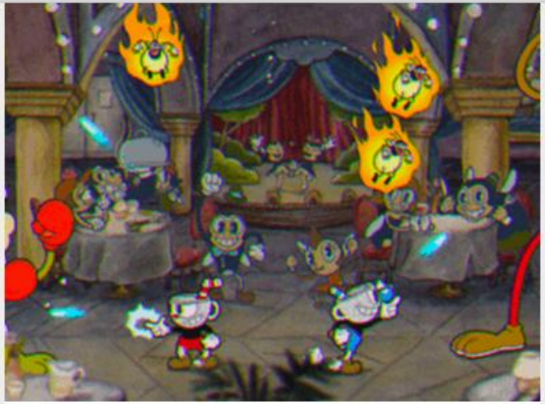


Overcooked

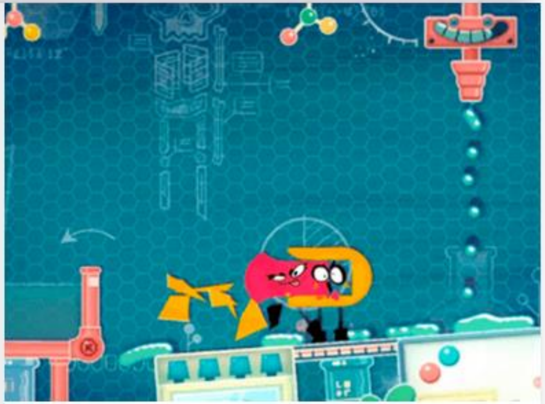
2D games



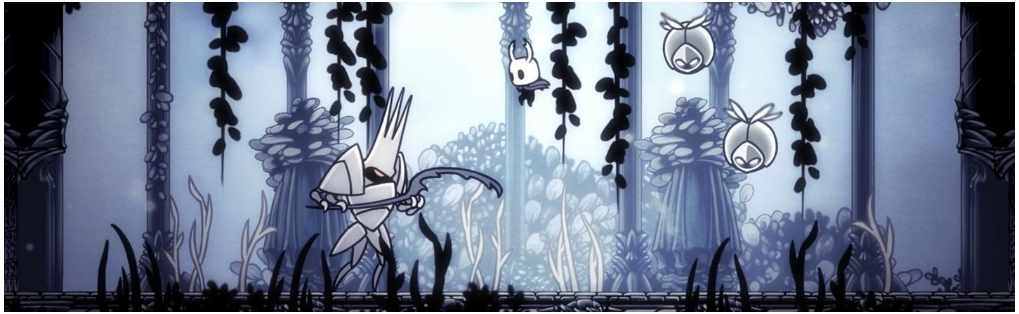
Heartstone

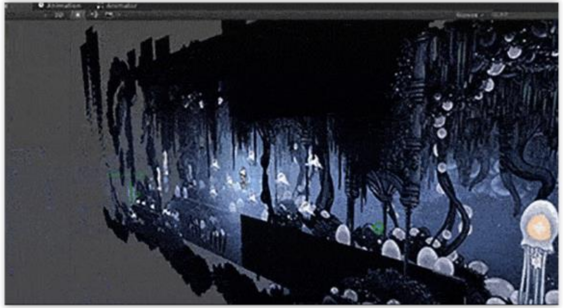


Cuphead

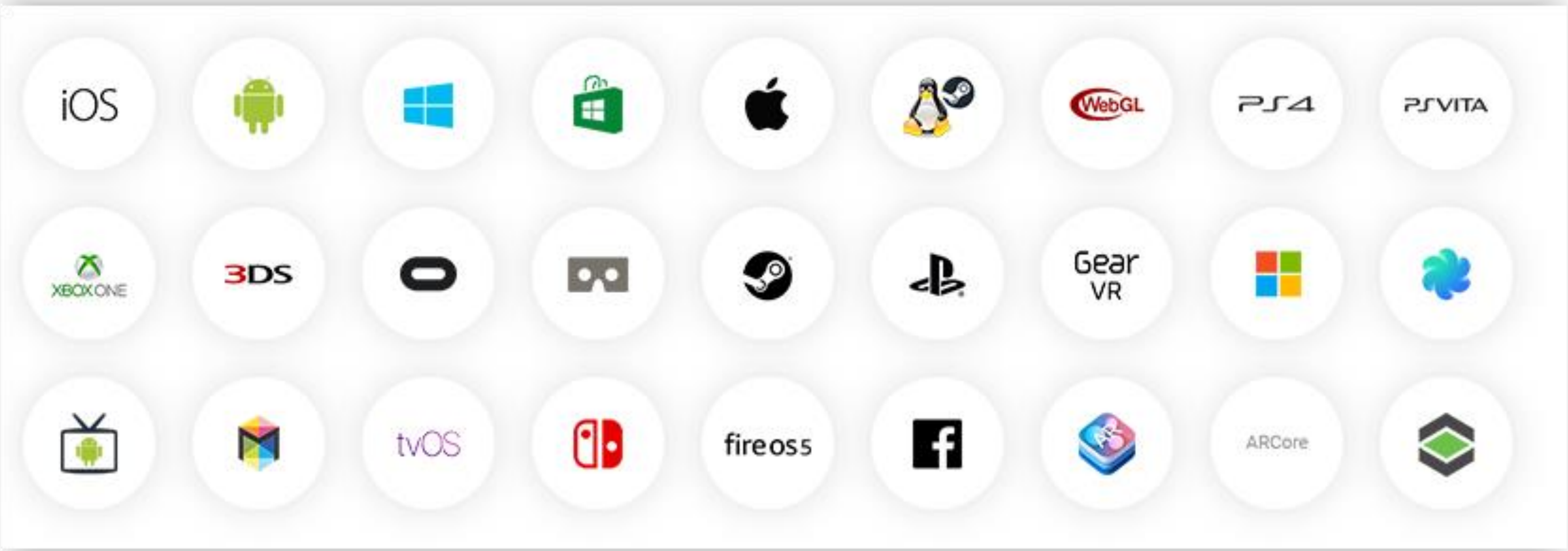


Snipperclips



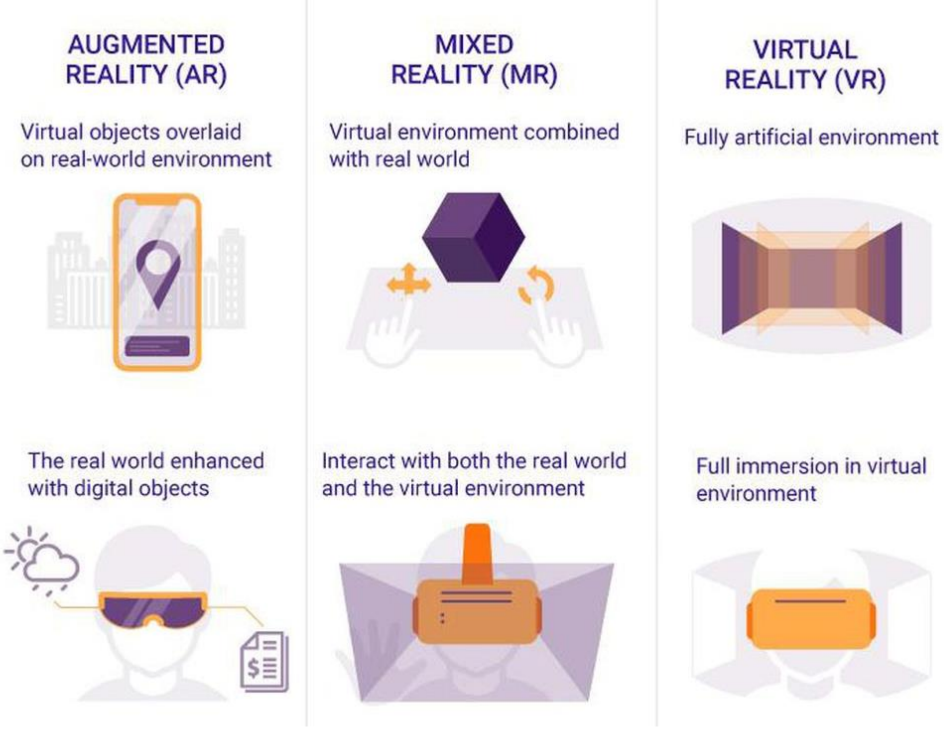


Cross-platforms



XR

VR, AR, MR, XR ?



AUGMENTED REALITY (AR)

Virtual objects overlaid on real-world environment

The real world enhanced with digital objects

MIXED REALITY (MR)

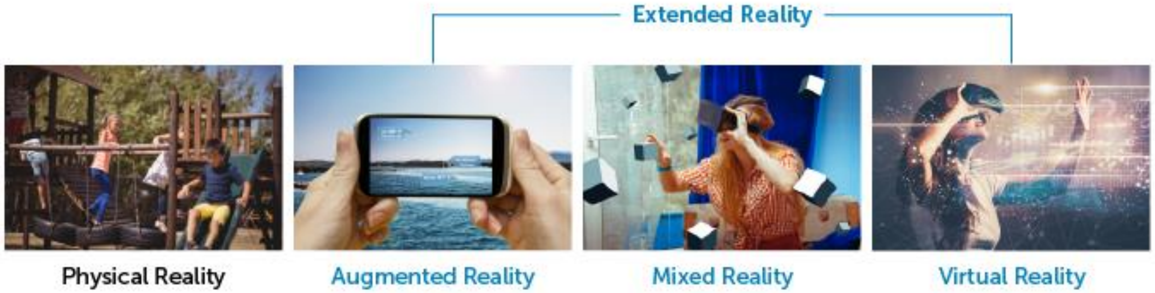
Virtual environment combined with real world

Interact with both the real world and the virtual environment

VIRTUAL REALITY (VR)

Fully artificial environment

Full immersion in virtual environment



Extended Reality

Physical Reality

Augmented Reality

Mixed Reality

Virtual Reality

XR platforms overview

virtual reality

augmented reality

PC

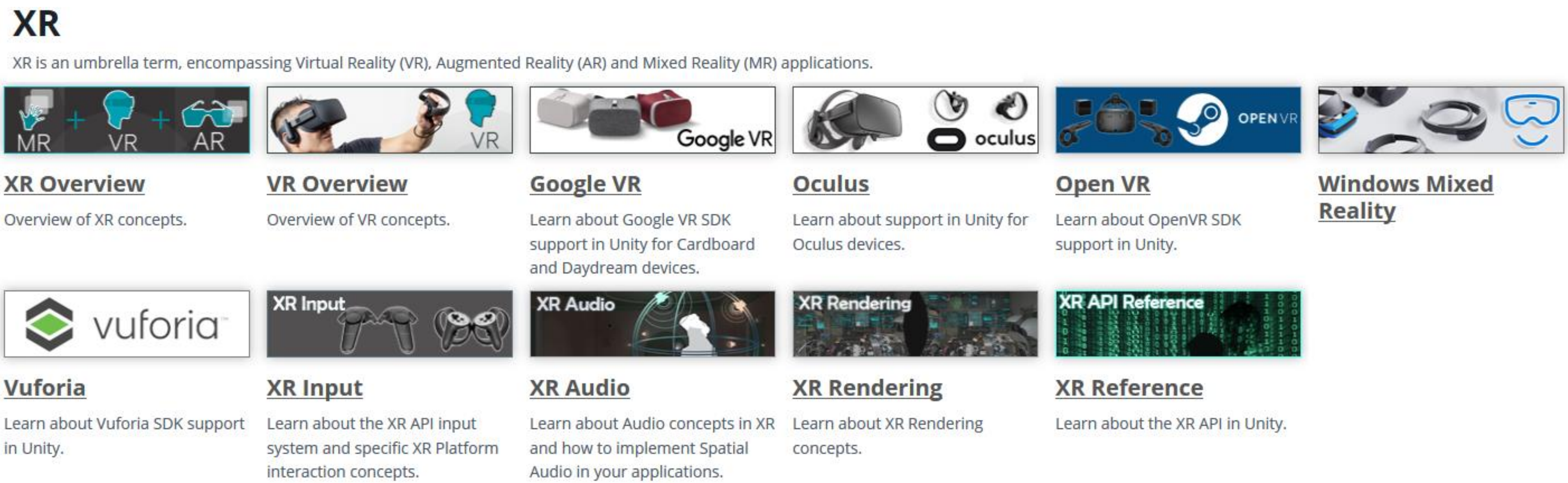
console

autonomous

mobile (3DOF)

ARKit ARCore

UnityXR-Ready



XR

XR is an umbrella term, encompassing Virtual Reality (VR), Augmented Reality (AR) and Mixed Reality (MR) applications.

XR Overview

Overview of XR concepts.

VR Overview

Overview of VR concepts.

Google VR

Learn about Google VR SDK support in Unity for Cardboard and Daydream devices.

Oculus

Learn about support in Unity for Oculus devices.

Open VR

Learn about OpenVR SDK support in Unity.

Windows Mixed Reality

Vuforia

Learn about Vuforia SDK support in Unity.

XR Input

Learn about the XR API input system and specific XR Platform interaction concepts.

XR Audio

Learn about Audio concepts in XR and how to implement Spatial Audio in your applications.

XR Rendering

Learn about XR Rendering concepts.

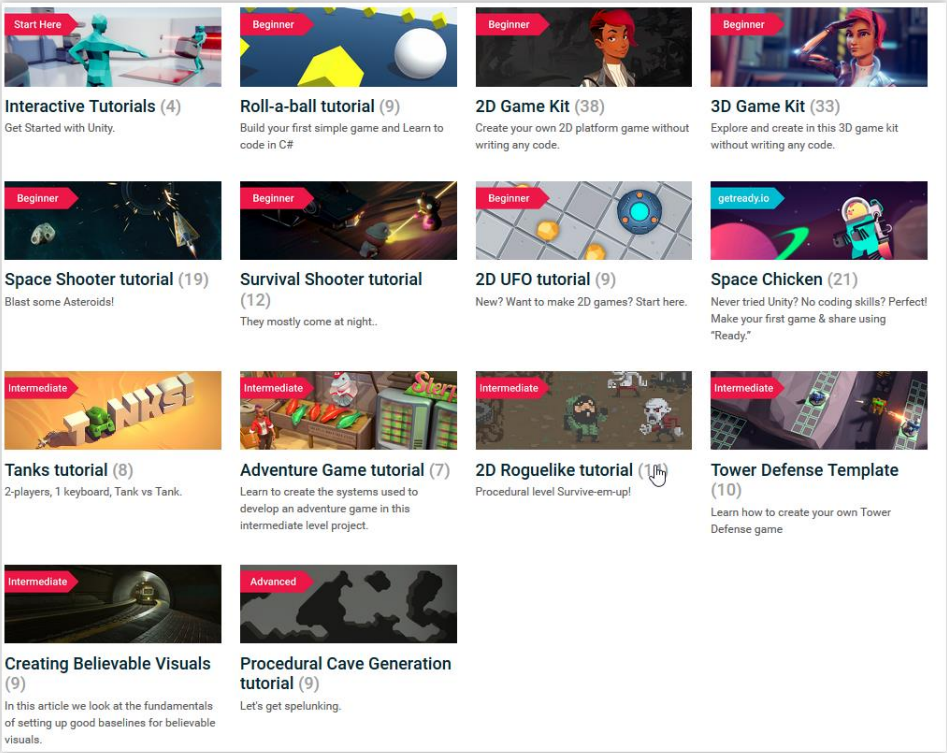
XR Reference

Learn about the XR API in Unity.

Unity
Quick start

Official tutorials

https://unity3d.com/fr/learn/tutorials



Start Here
Interactive Tutorials (4)
Get Started with Unity.

Beginner
Roll-a-ball tutorial (9)
Build your first simple game and Learn to code in C#

Beginner
2D Game Kit (38)
Create your own 2D platform game without writing any code.

Beginner
3D Game Kit (33)
Explore and create in this 3D game kit without writing any code.

Beginner
Space Shooter tutorial (19)
Blast some Asteroids!

Beginner
Survival Shooter tutorial (12)
They mostly come at night..

Beginner
2D UFO tutorial (9)
New? Want to make 2D games? Start here.

getready.io
Space Chicken (21)
Never tried Unity? No coding skills? Perfect! Make your first game & share using "Ready."

Intermediate
Tanks tutorial (8)
2-players, 1 keyboard, Tank vs Tank.

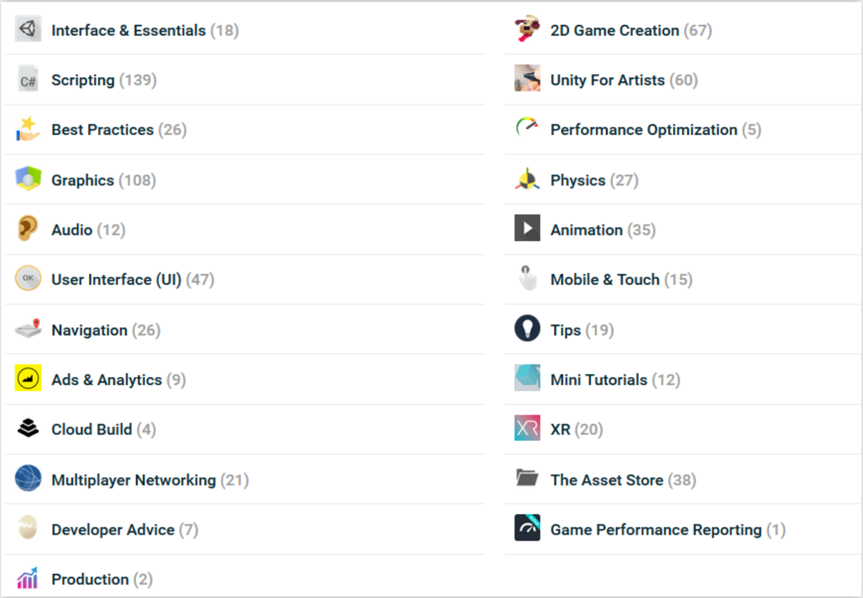
Intermediate
Adventure Game tutorial (7)
Learn to create the systems used to develop an adventure game in this intermediate level project.

Intermediate
2D Roguelike tutorial (14)
Procedural level Survive-em-up!

Intermediate
Tower Defense Template (10)
Learn how to create your own Tower Defense game

Intermediate
Creating Believable Visuals (9)
In this article we look at the fundamentals of setting up good baselines for believable visuals.

Advanced
Procedural Cave Generation tutorial (9)
Let's get spelunking.

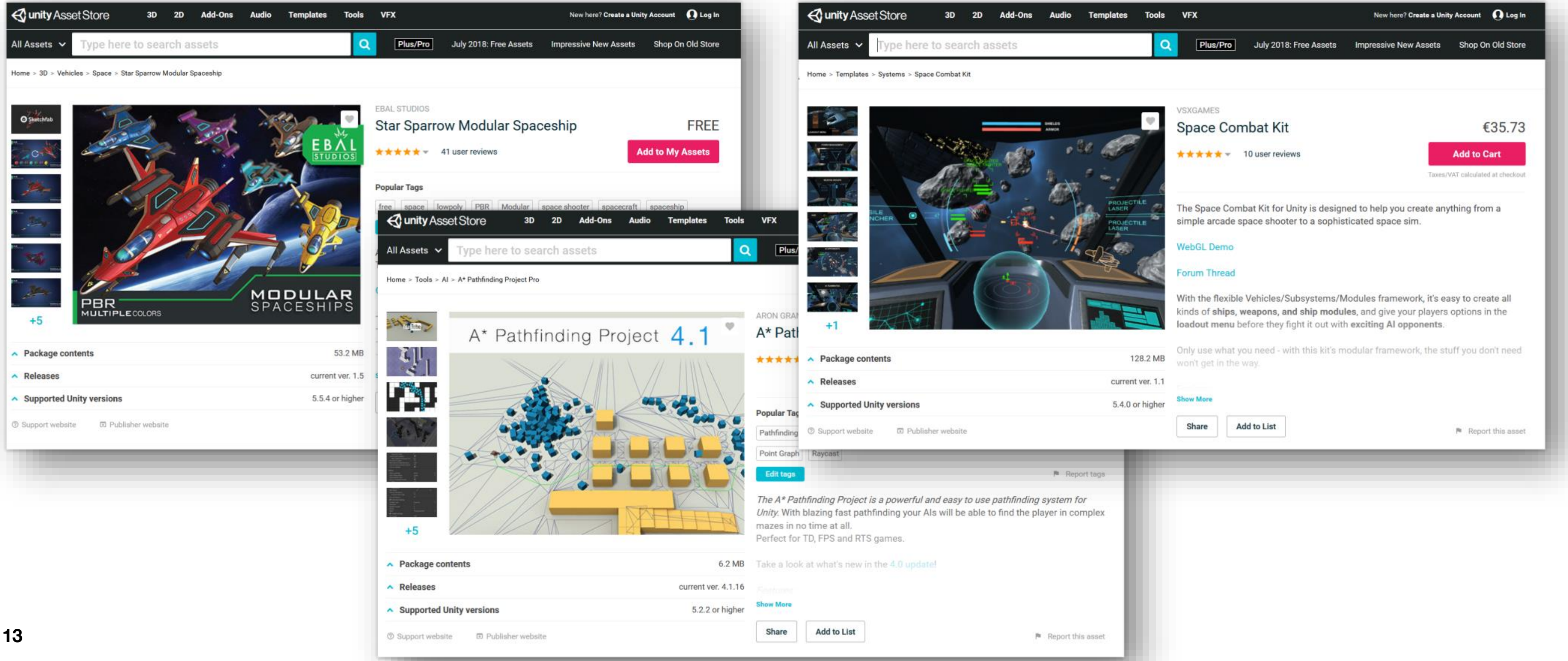


Interface & Essentials	(18)
Scripting	(139)
Best Practices	(26)
Graphics	(108)
Audio	(12)
User Interface (UI)	(47)
Navigation	(26)
Ads & Analytics	(9)
Cloud Build	(4)
Multiplayer Networking	(21)
Developer Advice	(7)
Production	(2)
2D Game Creation	(67)
Unity For Artists	(60)
Performance Optimization	(5)
Physics	(27)
Animation	(35)
Mobile & Touch	(15)
Tips	(19)
Mini Tutorials	(12)
XR	(20)
The Asset Store	(38)
Game Performance Reporting	(1)

Start here : https://learn.unity.com/project/roll-a-ball

Asset store

https://assetstore.unity.com/



Home > 3D > Vehicles > Space > Star Sparrow Modular Spaceship

EBAL STUDIOS

Star Sparrow Modular Spaceship — FREE

★★★★★ 41 user reviews

Package contents 53.2 MB

Releases current ver. 1.5

Supported Unity versions 5.5.4 or higher

Home > Tools > AI > A* Pathfinding Project Pro

ARON GRAN

A* Path

Package contents 6.2 MB

Releases current ver. 4.1.16

Supported Unity versions 5.2.2 or higher

The A Pathfinding Project is a powerful and easy to use pathfinding system for Unity.* With blazing fast pathfinding your AIs will be able to find the player in complex mazes in no time at all.
Perfect for TD, FPS and RTS games.

Take a look at what's new in the 4.0 update!

Home > Templates > Systems > Space Combat Kit

VSXGAMES

Space Combat Kit — €35.73

★★★★★ 10 user reviews

Taxes/VAT calculated at checkout

The Space Combat Kit for Unity is designed to help you create anything from a simple arcade space shooter to a sophisticated space sim.

WebGL Demo

Forum Thread

With the flexible Vehicles/Subsystems/Modules framework, it's easy to create all kinds of **ships, weapons, and ship modules**, and give your players options in the **loadout menu** before they fight it out with **exciting AI opponents**.

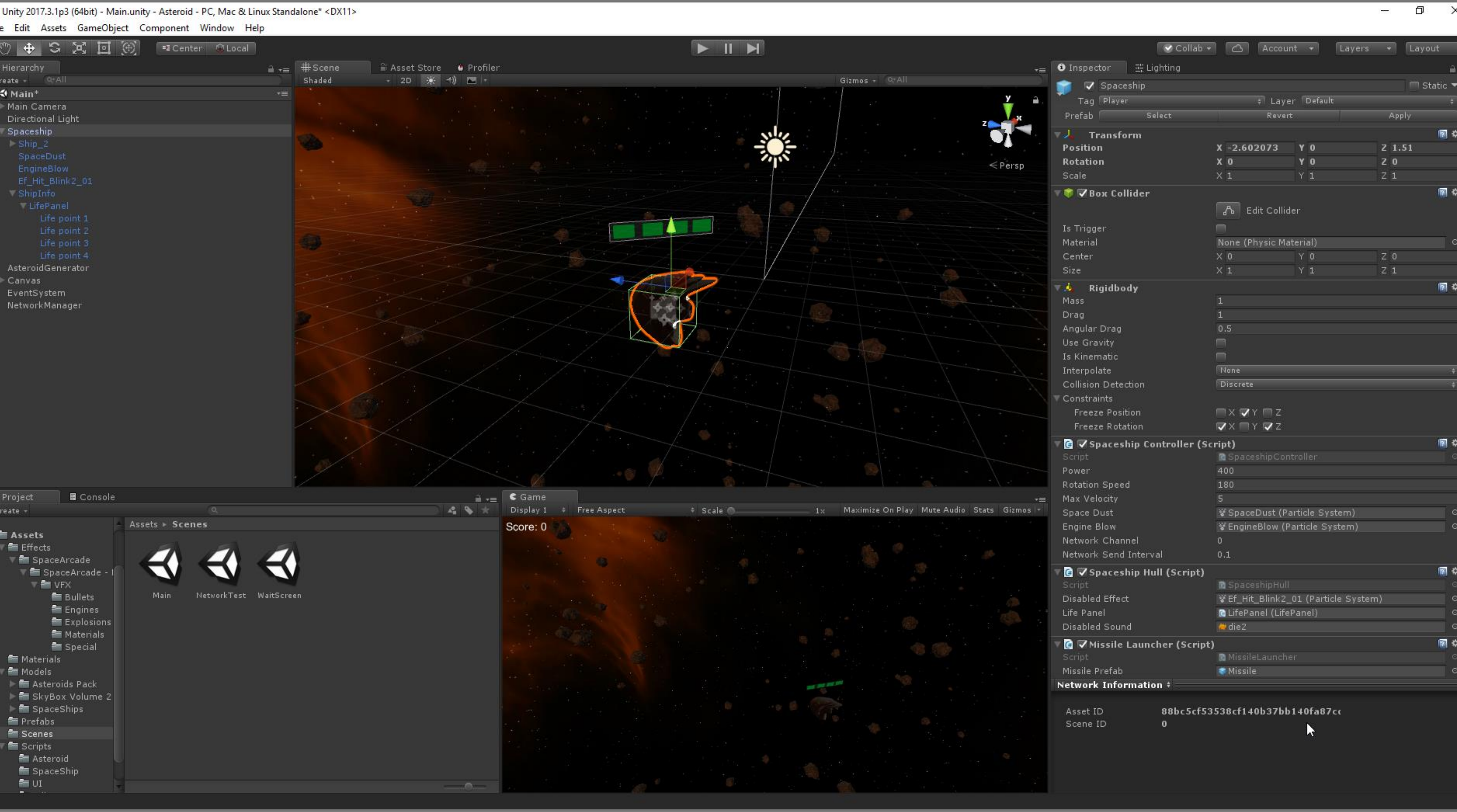
Only use what you need - with this kit's modular framework, the stuff you don't need won't get in the way.

Package contents 128.2 MB

Releases current ver. 1.1

Supported Unity versions 5.4.0 or higher

Unity Editor Organization



Main*
Main Camera
Directional Light
Spaceship
Ship_2
SpaceDust
EngineBlow
Ef_Hit_Blink2_01
ShipInfo
LifePanel
Life point 1
Life point 2
Life point 3
Life point 4
AsteroidGenerator
Canvas
EventSystem
NetworkManager

Assets
Effects
SpaceArcade
SpaceArcade - I
VFX
Bullets
Engines
Explosions
Materials
Special
Materials
Models
Asteroids Pack
SkyBox Volume 2
SpaceShips
Prefabs
Scenes
Scripts
Asteroid
SpaceShip
UI

Assets ▸ Scenes

Main
NetworkTest
WaitScreen

Score: 0

☑ Spaceship □ Static
Tag Player Layer Default
Prefab Select Revert Apply

Transform
Position X -2.602073 Y 0 Z 1.51
Rotation X 0 Y 0 Z 0
Scale X 1 Y 1 Z 1

☑ **Box Collider**
Edit Collider
Is Trigger □
Material None (Physic Material)
Center X 0 Y 0 Z 0
Size X 1 Y 1 Z 1

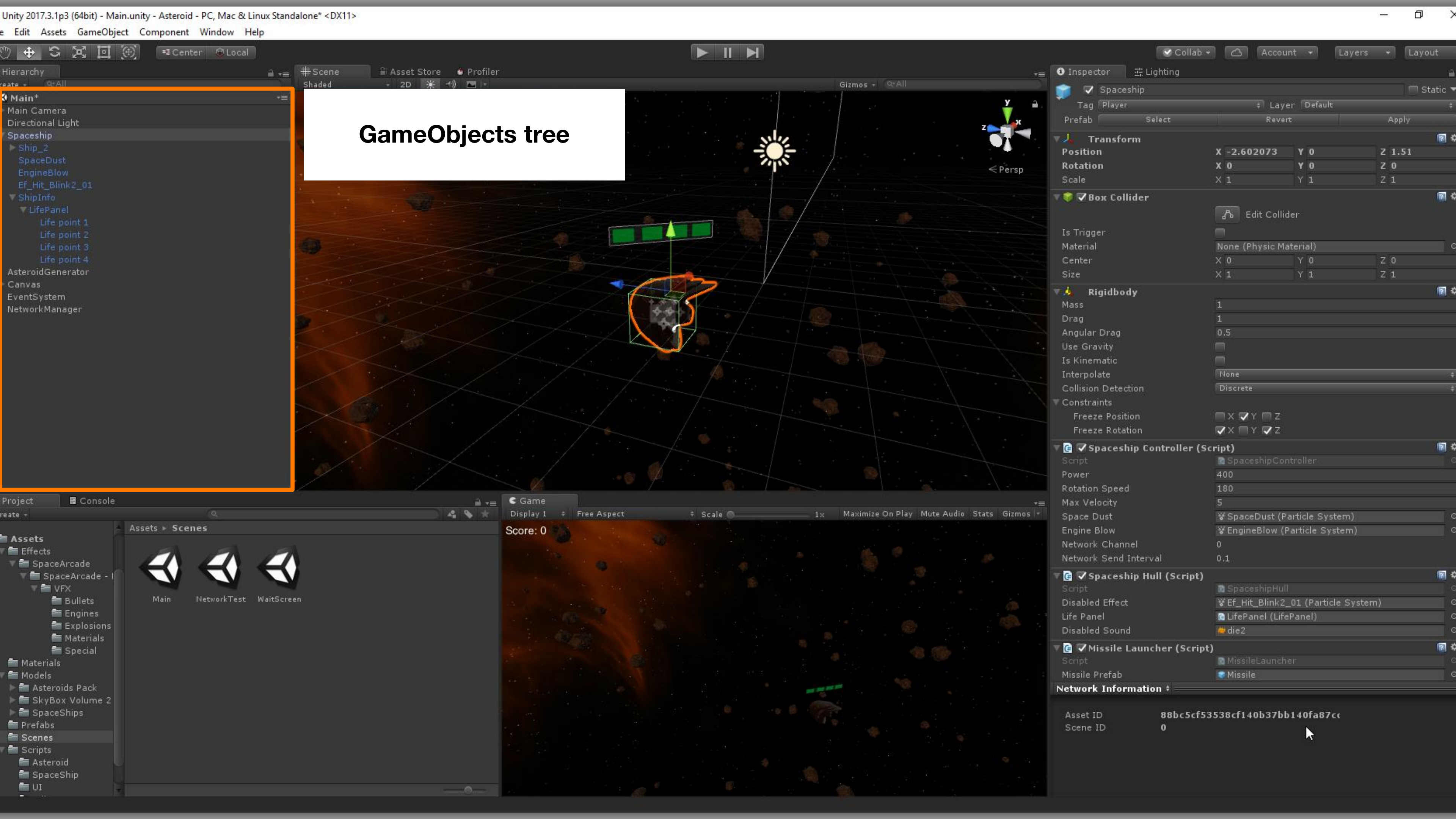
Rigidbody
Mass 1
Drag 1
Angular Drag 0.5
Use Gravity □
Is Kinematic □
Interpolate None
Collision Detection Discrete
Constraints
Freeze Position □ X ☑ Y □ Z
Freeze Rotation ☑ X □ Y ☑ Z

☑ **Spaceship Controller (Script)**
Script SpaceshipController
Power 400
Rotation Speed 180
Max Velocity 5
Space Dust SpaceDust (Particle System)
Engine Blow EngineBlow (Particle System)
Network Channel 0
Network Send Interval 0.1

☑ **Spaceship Hull (Script)**
Script SpaceshipHull
Disabled Effect Ef_Hit_Blink2_01 (Particle System)
Life Panel LifePanel (LifePanel)
Disabled Sound die2

☑ **Missile Launcher (Script)**
Script MissileLauncher
Missile Prefab Missile

Network Information
Asset ID 88bc5cf53538cf140b37bb140fa87cc
Scene ID 0



GameObjects tree

```
Main*
  Main Camera
  Directional Light
  Spaceship
    ▶ Ship_2
    SpaceDust
    EngineBlow
    Ef_Hit_Blink2_01
    ▼ ShipInfo
      ▼ LifePanel
          Life point 1
          Life point 2
          Life point 3
          Life point 4
  AsteroidGenerator
  Canvas
  EventSystem
  NetworkManager
```

```
Assets
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    SpaceArcade
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          Explosions
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          Special
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  Models
    Asteroids Pack
    SkyBox Volume 2
    SpaceShips
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  Scenes
  Scripts
    Asteroid
    SpaceShip
    UI
```

☑ Spaceship   □ Static
Tag Player   Layer Default
Prefab   Select   Revert   Apply

Transform
Position   X -2.602073   Y 0   Z 1.51
Rotation   X 0   Y 0   Z 0
Scale   X 1   Y 1   Z 1

☑ Box Collider
Edit Collider
Is Trigger   □
Material   None (Physic Material)
Center   X 0   Y 0   Z 0
Size   X 1   Y 1   Z 1

Rigidbody
Mass   1
Drag   1
Angular Drag   0.5
Use Gravity   □
Is Kinematic   □
Interpolate   None
Collision Detection   Discrete
Constraints
Freeze Position   □ X ☑ Y □ Z
Freeze Rotation   ☑ X □ Y ☑ Z

☑ Spaceship Controller (Script)
Script   SpaceshipController
Power   400
Rotation Speed   180
Max Velocity   5
Space Dust   SpaceDust (Particle System)
Engine Blow   EngineBlow (Particle System)
Network Channel   0
Network Send Interval   0.1

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Script   SpaceshipHull
Disabled Effect   Ef_Hit_Blink2_01 (Particle System)
Life Panel   LifePanel (LifePanel)
Disabled Sound   die2

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Script   MissileLauncher
Missile Prefab   Missile

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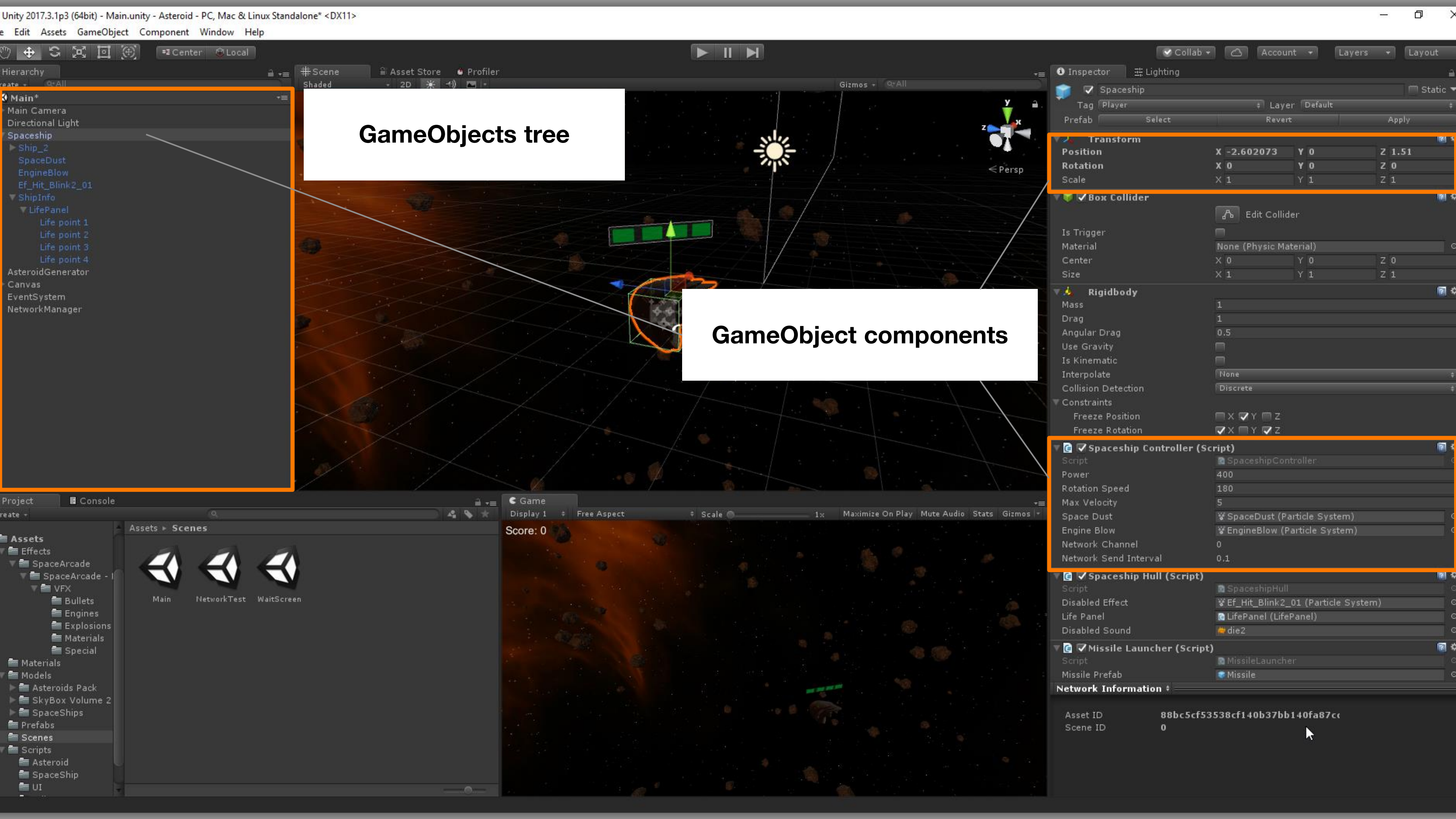

GameObjects tree

GameObject components

Main*
- Main Camera
- Directional Light
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  - Ship_2
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  - SpaceShips
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- Scripts
  - Asteroid
  - SpaceShip
  - UI

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Tag Player Layer Default
Prefab Select Revert Apply

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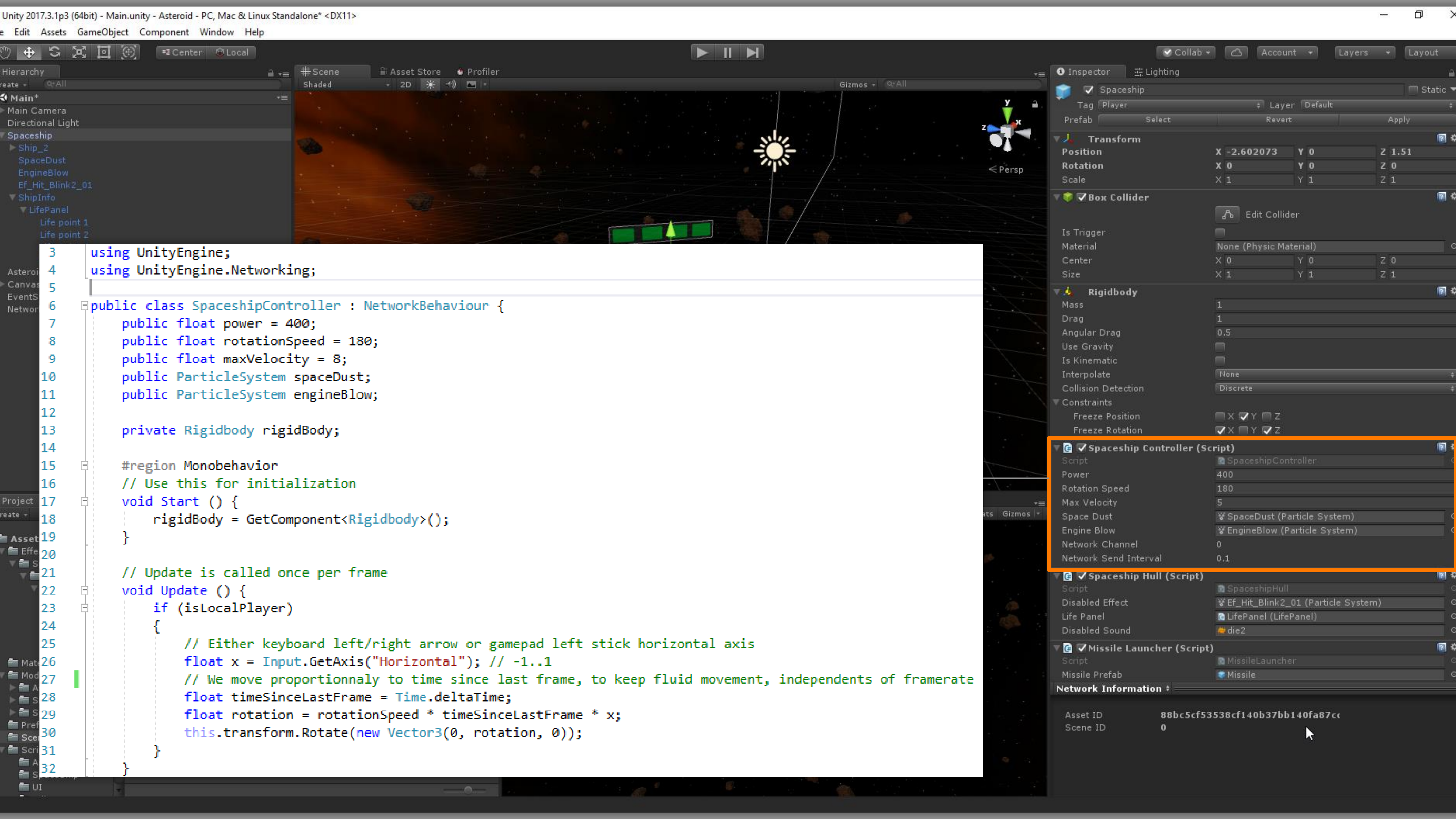

```
using UnityEngine;
using UnityEngine.Networking;

public class SpaceshipController : NetworkBehaviour {
    public float power = 400;
    public float rotationSpeed = 180;
    public float maxVelocity = 8;
    public ParticleSystem spaceDust;
    public ParticleSystem engineBlow;

    private Rigidbody rigidBody;

    #region Monobehavior
    // Use this for initialization
    void Start () {
        rigidBody = GetComponent<Rigidbody>();
    }

    // Update is called once per frame
    void Update () {
        if (isLocalPlayer)
        {
            // Either keyboard left/right arrow or gamepad left stick horizontal axis
            float x = Input.GetAxis("Horizontal"); // -1..1
            // We move proportionnaly to time since last frame, to keep fluid movement, independents of framerate
            float timeSinceLastFrame = Time.deltaTime;
            float rotation = rotationSpeed * timeSinceLastFrame * x;
            this.transform.Rotate(new Vector3(0, rotation, 0));
        }
    }
```

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Prefab Select Revert Apply

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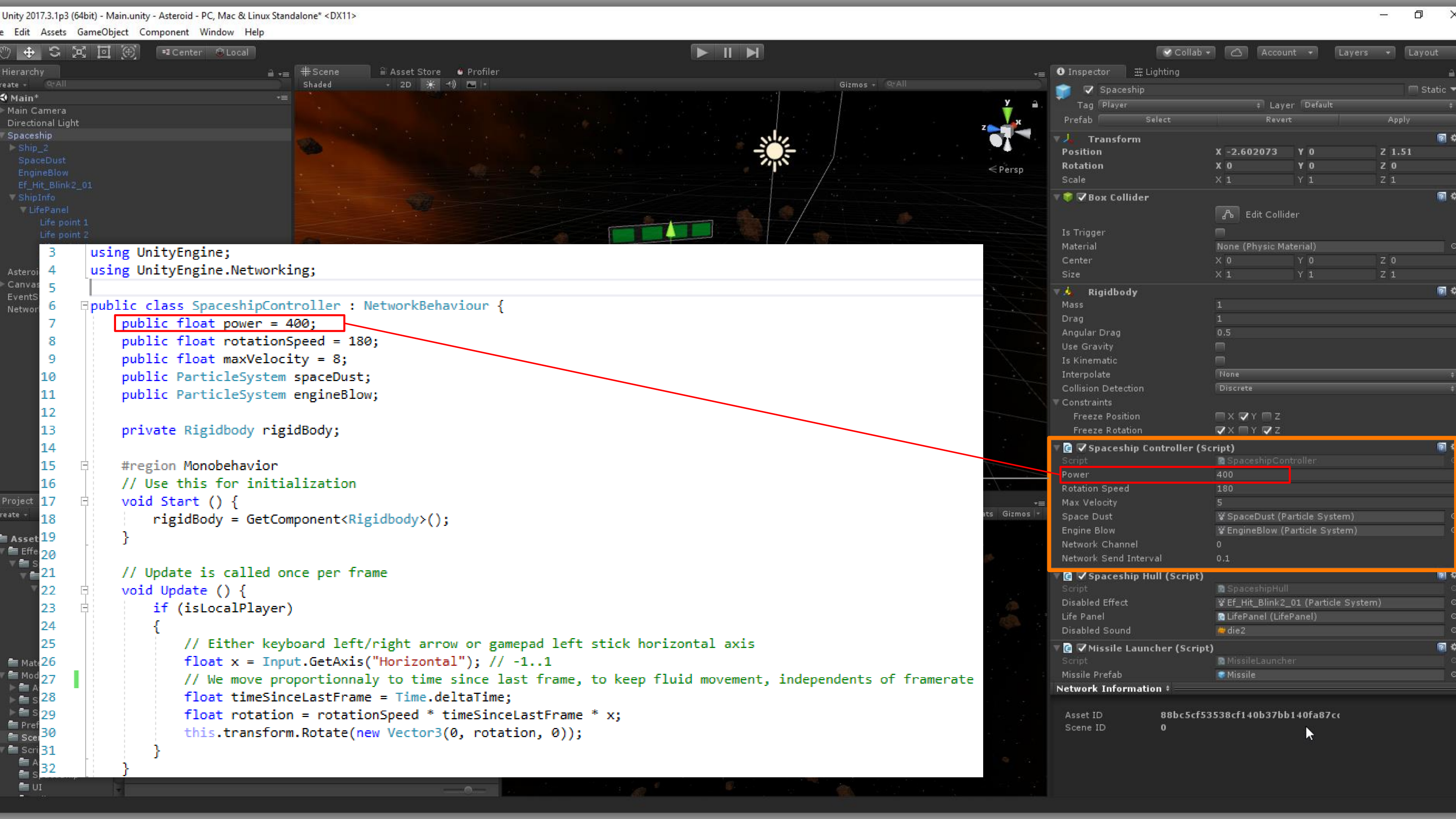

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Is Kinematic ☐
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Collision Detection Discrete
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Freeze Position ☐ X ☑ Y ☐ Z
Freeze Rotation ☑ X ☐ Y ☑ Z

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Thank you

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