Fixed Camera Angle

DOCUMENTATION

KRELI STUDIO

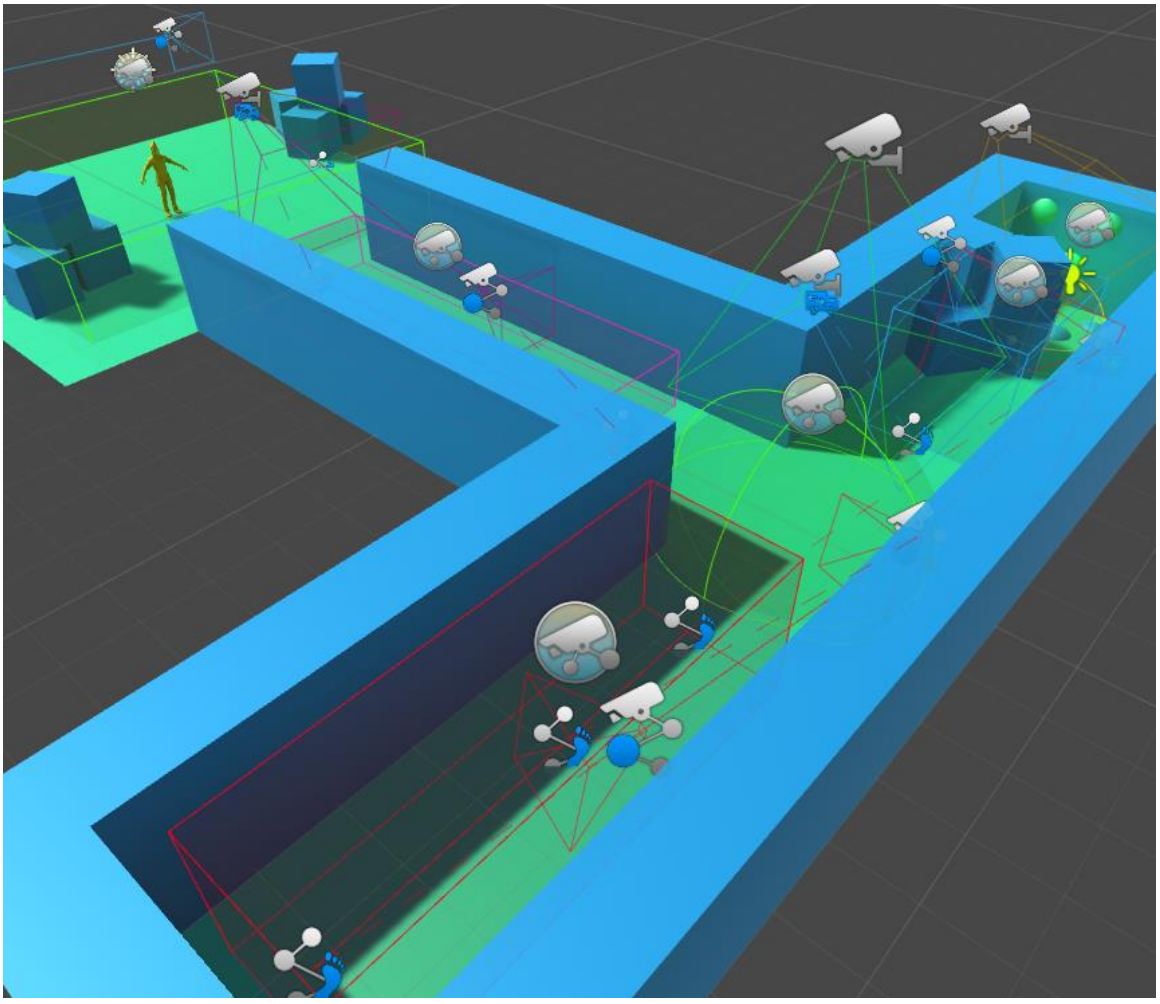
Kreli Studio

Contents

More examples and tutorials available on 

1. System Overview

What is a Fixed Camera Angle? The camera will either stay in a fixed location while the character roams about, or it will follow the player's movement only from a fixed angle and distance. Examples of games using fixed camera angle are Resident Evil, Dino Crisis, Until Down. Our camera system have all of this features and much more. Very simple to use by a simple inspector which is divided into categories and ordered. The system has an extensive, fully customizable debugging panel that helps build complicated fixed cameras.



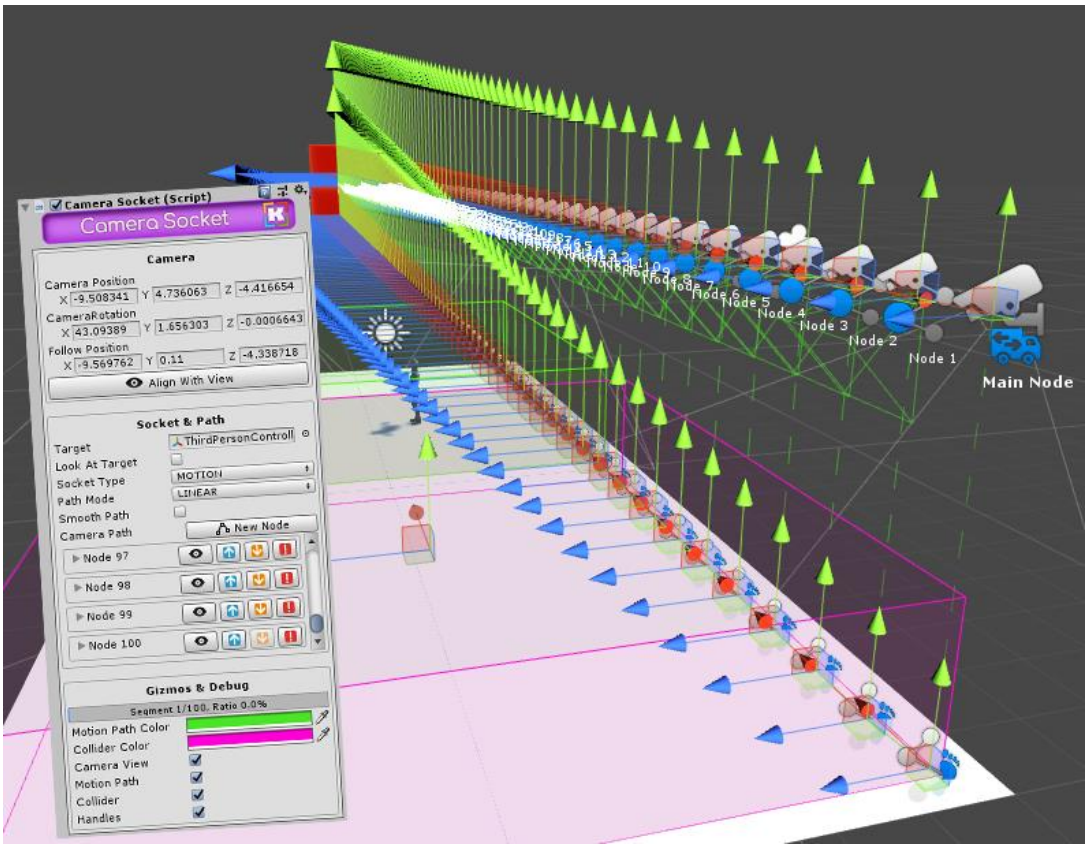
Our system has all the features that must have a fixed camera angle and few more:

- Stationary camera,
- Looking at target,
- Moving the camera along a linear or curved trajectory,
- Smooth camera movement between nodes,
- Smooth camera transition between different camera sockets,
- Creating a path on which the camera moves,
- Align the camera's node to the current scene view with one button,

- Managing multiple colliders in one Game Object allows you to keep order and clean scene
- Extensive debugging system displaying a lot of helpful information,
    - Icons,
    - Camera view from each node
    - Colliders even if not selected
    - Camera path
    - Target tracking path
    - Handles for move, rotate and scale all elements
    - Information about the current camera position on path

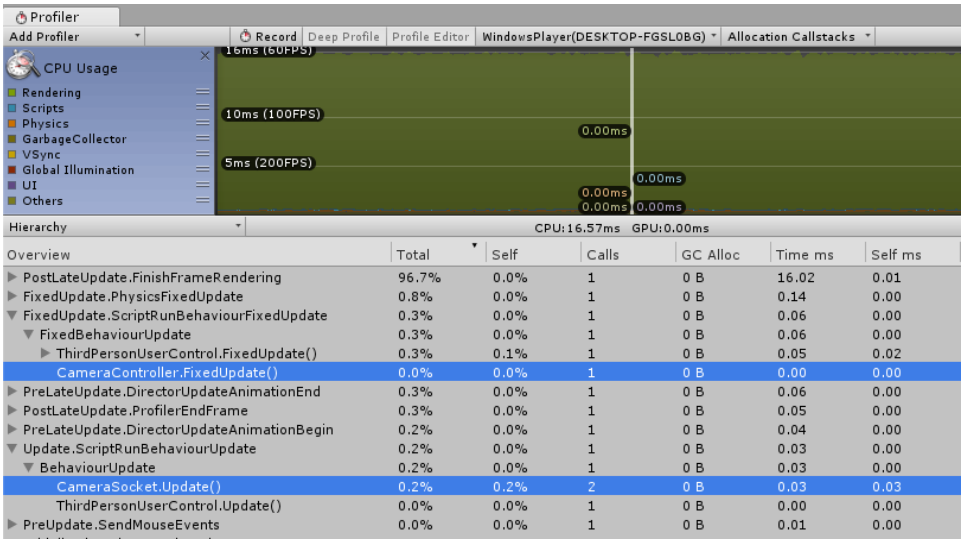
2. Optimization

The Camera Socket component consists of 4 tabs in which there are categorized tools to support Fixed Camera Angle – Socket, Colliders, Motion, Gizmos. The entire mechanics calculation takes place in the active Camera Socket component and the ready camera position is sent to the Main Camera object. The calculations are optimized and consume little hardware resources. For a scene with two Camera Socket and 100 nodes, performance is as follows.



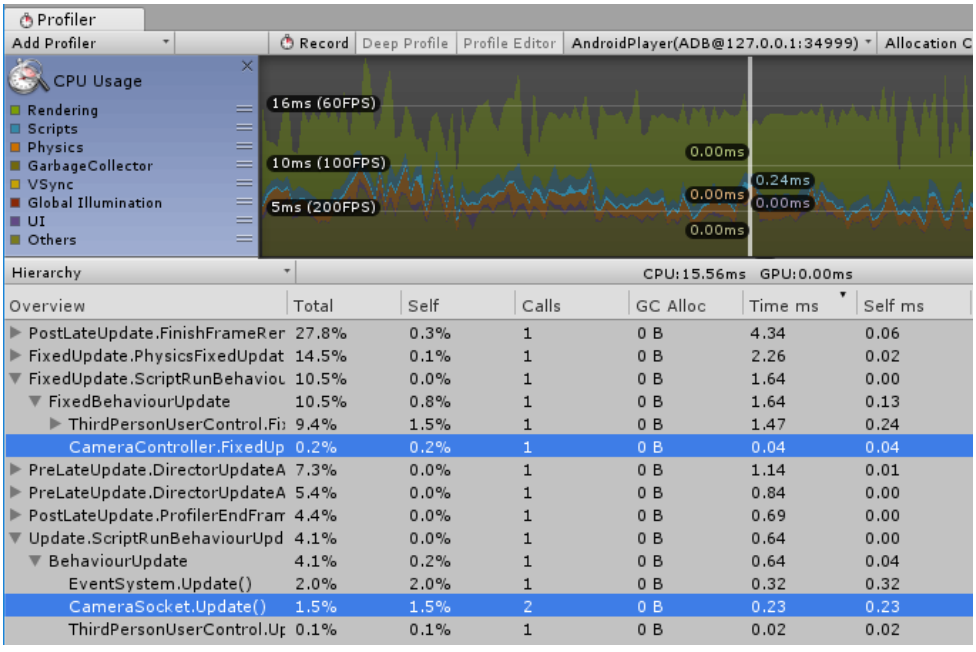
Consumption CPU resource for a desktop application:

- 0.0% for CameraController
- 0.2% for CameraSocket



Consumption CPU resource for a Android application (Samsung Galaxy S5):

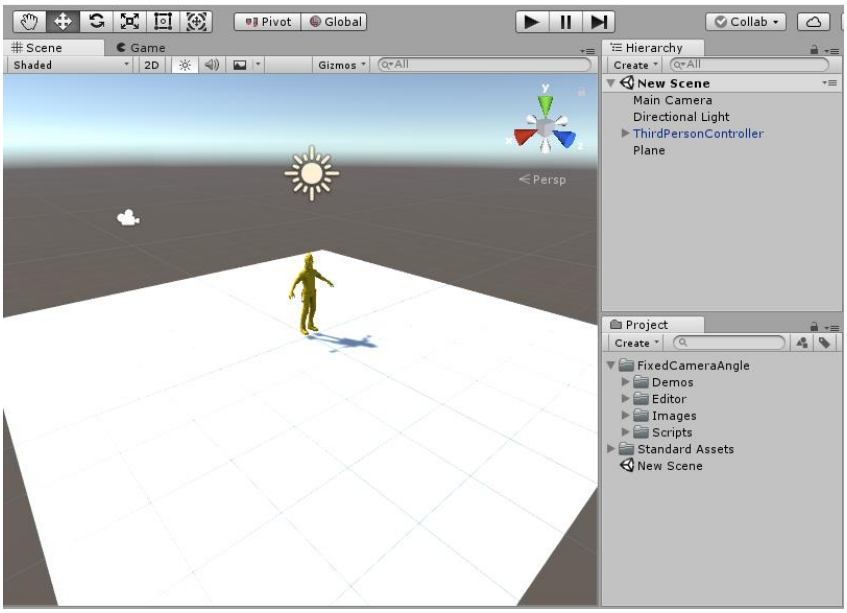
- 0.2% for CameraController
- 1.5% for CameraSocket



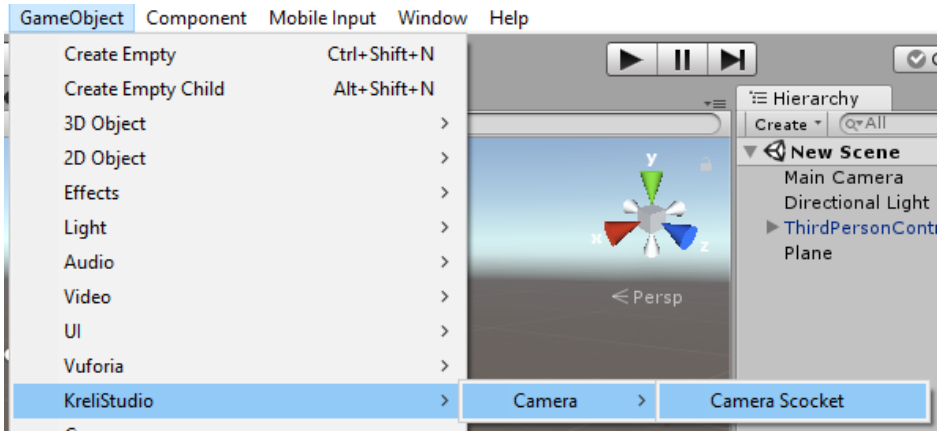
3. How to use

To create simply scene with Fixed Camera Angle you have to do:

1. Import Fixed Camera Angle Asset.
2. Create scene with Main Camera and Player objects.

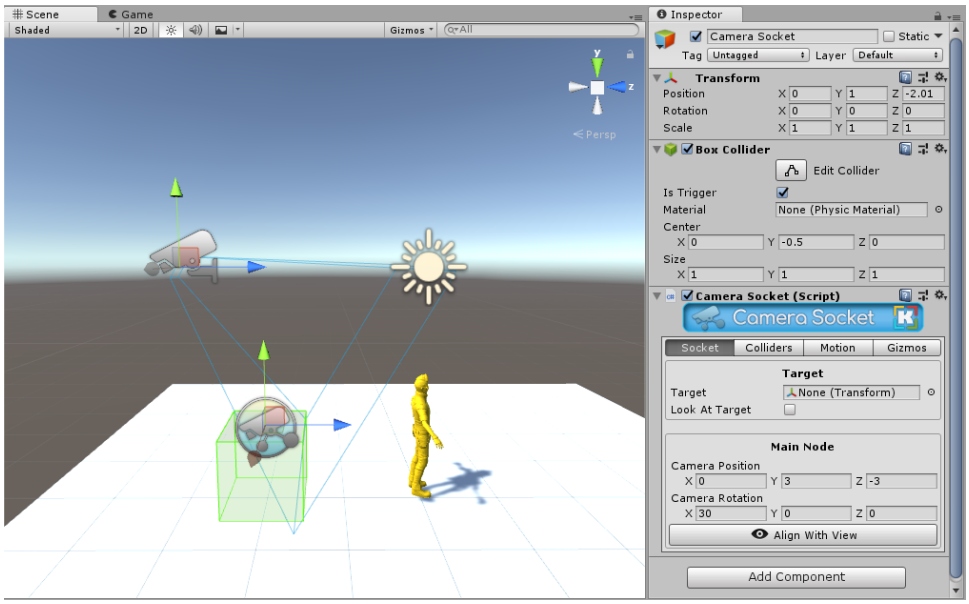


3. Create Camera Socket from GameObject menu “GameObject/KreliStudio/ Camera/CameraSocket”.



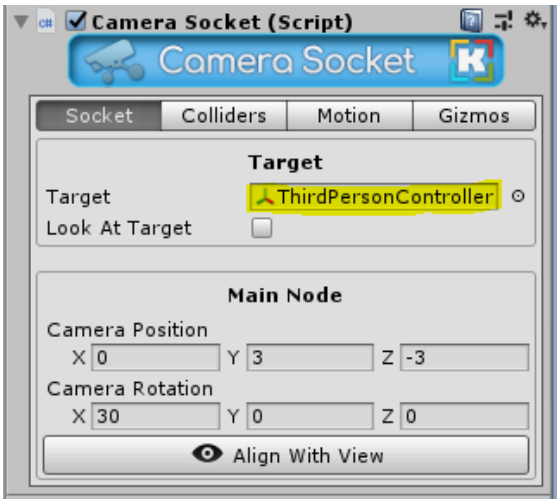
At first time you create the Camera Socket, a gizmos folder will be added to the project.

4. Set the position and rotation of the Main Node the camera should have.

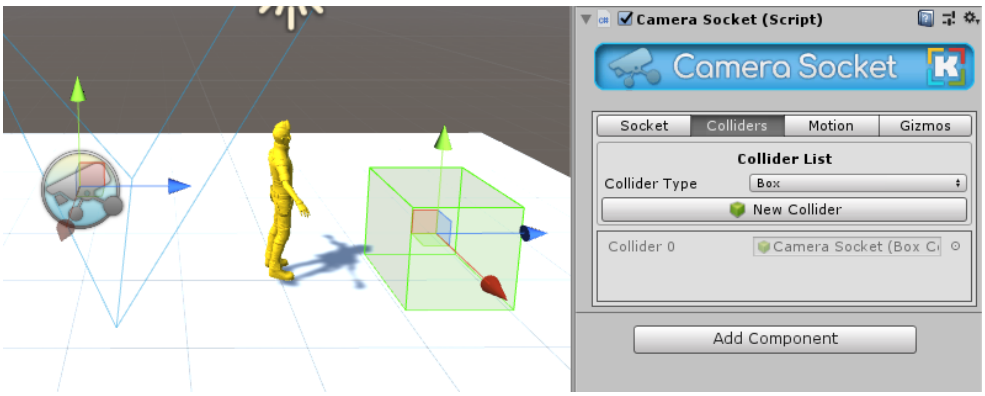


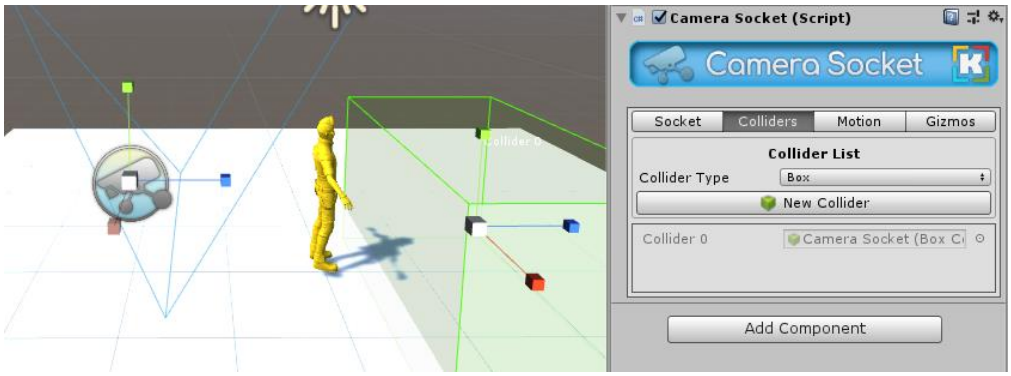
Gizmos Icon shows the exact position where the camera will be and the blue frustum shows direction of its view

5. Add player transform component to “Target” properties in Camera Socket component.

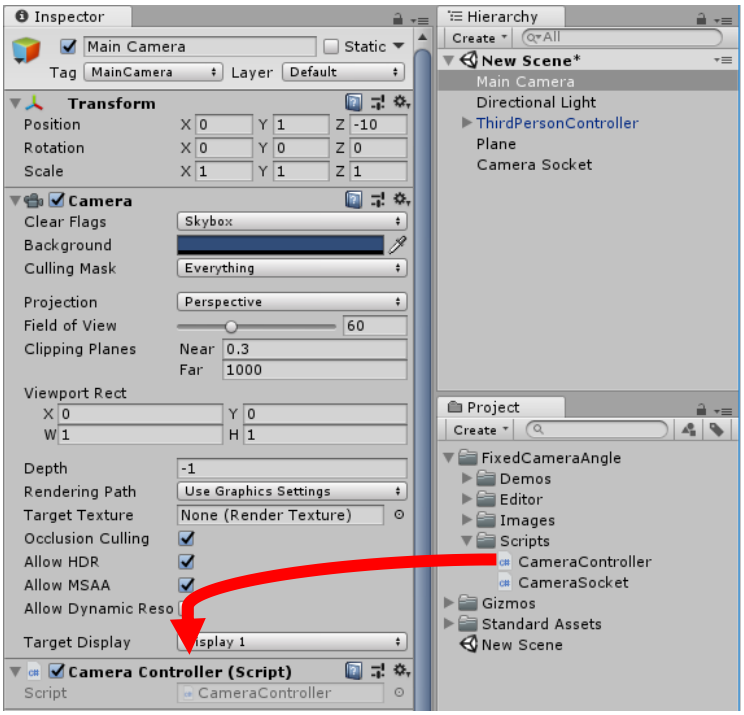


6. Go to “Colliders” tab and then move the collider by handle in the location you want to. You can change size also by handle.

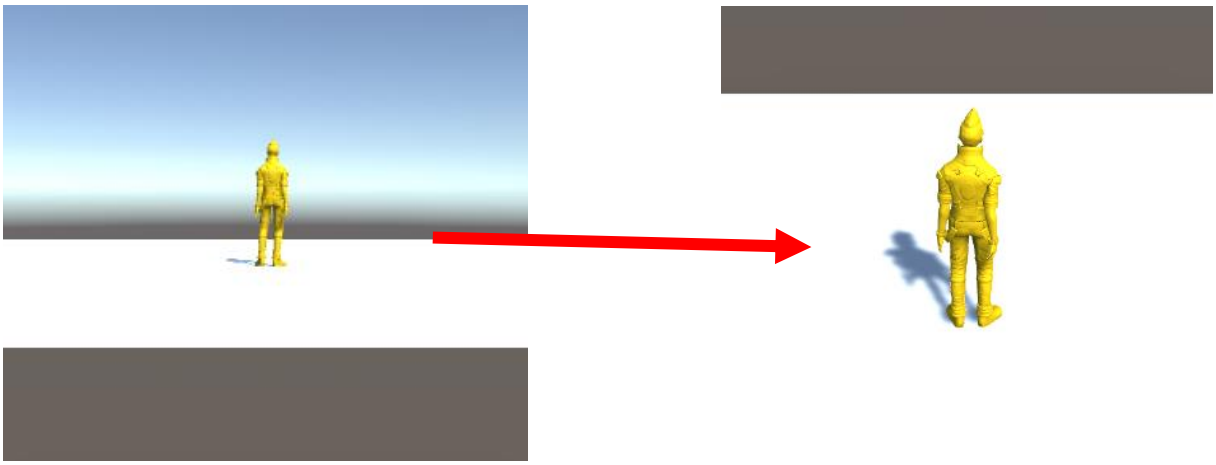




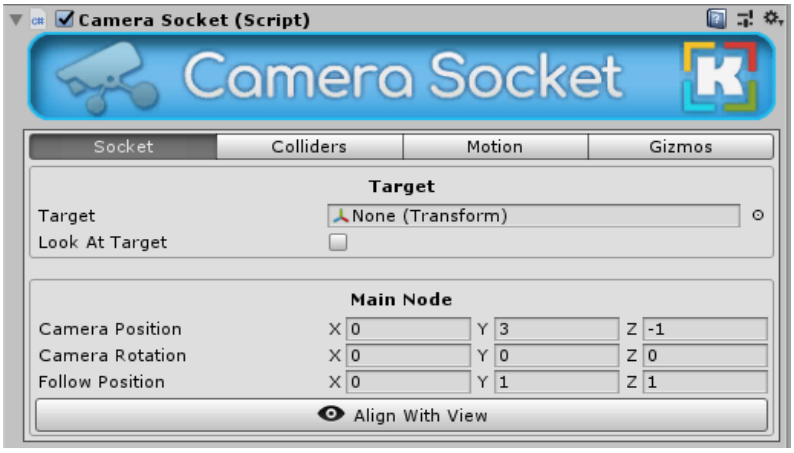
7. Add “CameraController” script to Main Camera object.



8. That's all. Now turn on the scene and enter the area of the collider and the camera will be set to the Main Node position.



4. Detailed description



If **Socket** tab is selected move or rotation handles for Main Node is displayed.

Target - object that starts the camera socket after entering the collider and the object the camera is supposed to look at.

Look At Target – if selected then camera will look at target.

Camera Position – camera adopts this position after activation of the socket (when socket type is Static)**.**

Camera Rotation – camera adopts this rotation after activation of the socket (when socket type is Static).

Follow Position – the camera position is calculated in proportion to the nearest point on the Follow Path and target (when socket type is Motion).

Align With View – if button pressed then Main Node position and rotation is align to actual scene view.

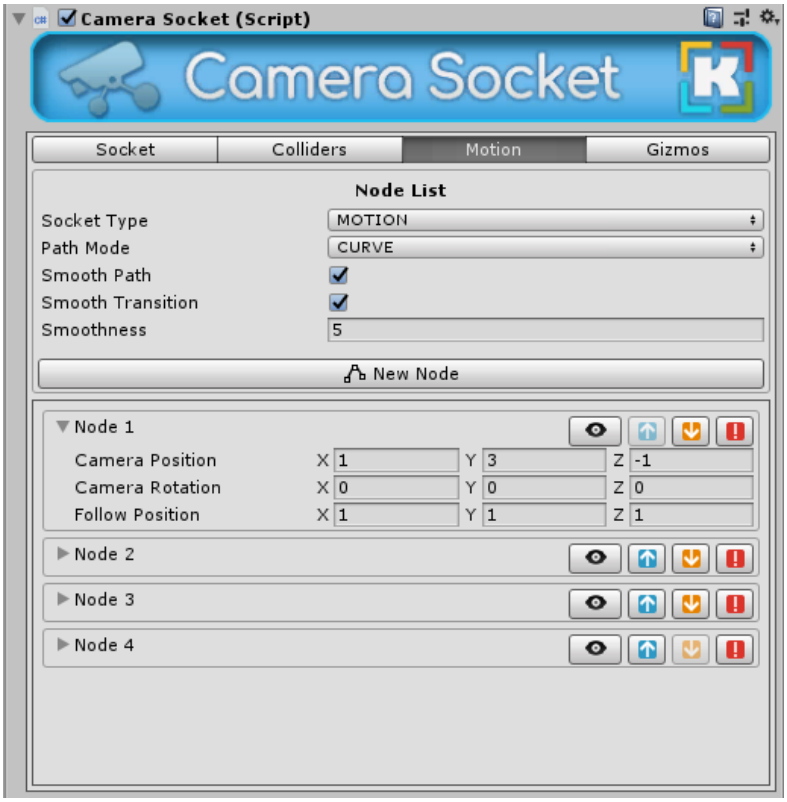
If **Colliders** tab is selected move or scale handles for all colliders in this object is displayed.

Collider Type – type of collider you want to create (Box and Sphere colliders are avaliable, simply and enough).

New Collider – if button pressed then add selected type collider component to this object.

List – list of added colliders in this object.

[!] – if button pressed then remove this collider from object.



If **Motion** tab is selected move or rotation handles for all Camera nodes and Follow nodes in this object is displayed.

Socket Type - determines the type of Socket (Static or Motion).

Path Mode - determines the type of camera movement between Camera node positions (Linear or Curve).

Smooth Path - it allows the camera to move smoothly between camera node positions.

Smooth Transition - it allows the camera to move smoothly to this camera socket from another.

Smoothness - speed of the smoothness with which the camera moves for the option Smooth Path and Transition.

New Node – if button pressed then new node is added to scene and to list below.

Node -> Camera Position - camera moves between these positions in direct proportion to the point on the follow path.

Node -> Camera Rotation - camera rotate between these rotation in direct proportion to the point on the follow path.

Node -> Follow Position - position of path on which target should move.

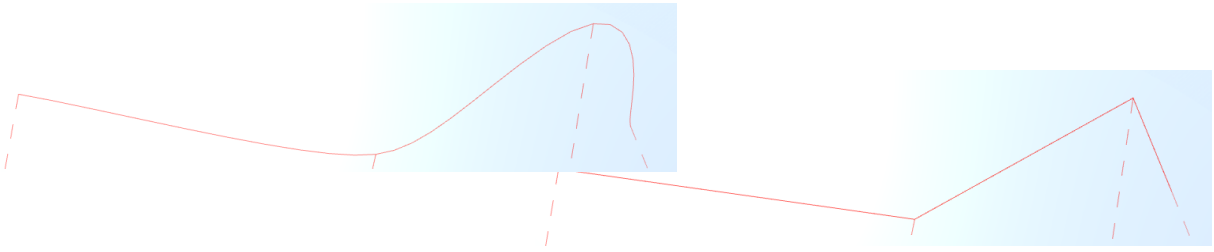
Node -> [eye] - if button pressed then this Node position and rotation is align to actual scene view.

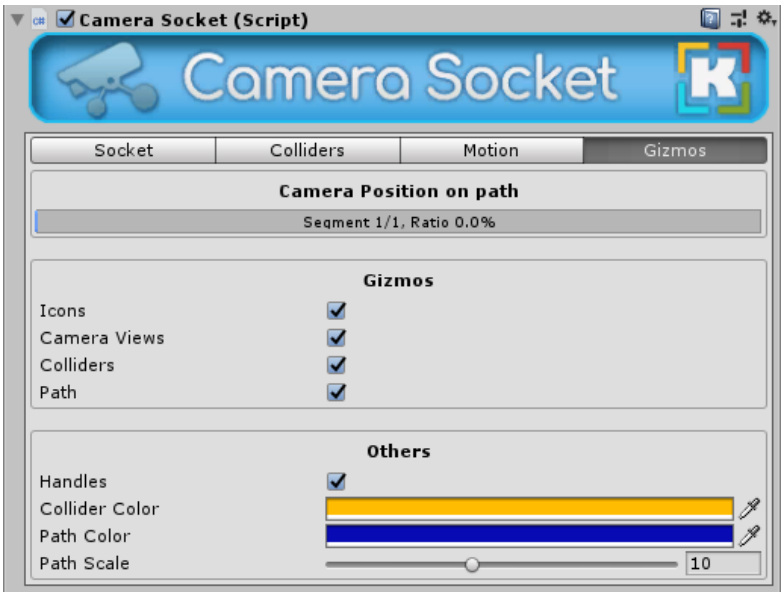
Node -> [up arrow] - if button pressed then this Node is move up in list hierarchy.

Node -> [down arrow] - if button pressed then this Node is move down in list hierarchy.

Node -> [!] - if button pressed then remove this Node from scene and list.

Visualization of difference between linear and curve path mode. Below is the same path with other **Path Mode.**





Camera Position on path - progress bar shows the current camera position in the Camera Socket. Segment is the path between nodes and ratio is the percentage of traveled this segment by the camera.

Icons – turn on/off helper icon gizmos on this object.

Camera Views – turn on/off nodes frustum gizmos representing the camera view.

Colliders – turn on/off collider gizmos.

Path – turn on/off lines gizmos representing the motion paths.

Handles – turn on/off helper handles from colliders and nodes.

Collider Color – you can set your own collider gizmos color.

Path Color – you can set your own path lines gizmos color.

Path Scale – resolution of lines gizmos for curve path.