$Suratram\_mixed Reality Simulator$ 

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## **Chapter 1**

# **Documentation of Suratram MixedRealitySimulator.**

**Suratram MixedRealitySimulator** 

Modify the path following parameters

Go in the GameObject>SplineWalker and interactively sets the new behaviour you want.

# **Chapter 2**

# **Hierarchical Index**

## 2.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

Editor	
BezierCurveInspector	11
BezierSplineInspector	
LineInspector	
SplineWalkerInspector	39
MonoBehaviour	
BezierCurve	
BezierSpline	
easySpline	
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# **Chapter 3**

# **Class Index**

## 3.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

BezierCurve	9
BezierCurveInspector	11
BezierSpline	13
BezierSplineInspector	17
easySpline	
Interface to adapt the size of the Spline.	21
nformations	
Class that displays some general informations on a Text component	23
Line	26
LineInspector	27
monitoring	
This class monitors, by retrieving differents informations in the scene.	28
SplineWalker	
Class that handles the movements a Vehicle on a Spline	34
SplineWalkerInspector SplineWalkerInspector	
Class that format the SplineWalker settings to a more user-friendly one.	39

6 Class Index

# **Chapter 4**

# File Index

## 4.1 File List

Here is a list of all files with brief descriptions:

/root/Documents/Unity_ST40/Suratram_mixedRealitySimulator/Assets/Scripts/monitoring.cs	43
/root/Documents/Unity_ST40/Suratram_mixedRealitySimulator/Assets/Scripts/Bezier/Bezier.cs	41
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PointMode.cs	41
$/root/Documents/Unity\_ST40/Suratram\_mixedRealitySimulator/Assets/Scripts/Bezier/BezierCurve.cs \ . \ .$	42
$/root/Documents/Unity\_ST40/Suratram\_mixedRealitySimulator/Assets/Scripts/Bezier/BezierSpline.cs \ . \ .$	42
$/root/Documents/Unity\_ST40/Suratram\_mixedRealitySimulator/Assets/Scripts/Bezier/easySpline.cs~.~.$	42
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$/root/Documents/Unity\_ST40/Suratram\_mixedRealitySimulator/Assets/Scripts/Bezier/Editor/Bezier \leftarrow$	
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Inspector.cs	42
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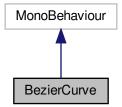
8 File Index

# **Chapter 5**

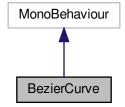
## **Class Documentation**

## 5.1 BezierCurve Class Reference

Inheritance diagram for BezierCurve:



Collaboration diagram for BezierCurve:



## **Public Member Functions**

- Vector3 GetPoint (float t)
- Vector3 GetVelocity (float t)
- void Reset ()
- Vector3 GetDirection (float t)

## **Public Attributes**

• Vector3 [] points

## 5.1.1 Member Function Documentation

## 5.1.1.1 GetDirection()

```
\begin{tabular}{ll} \begin{tabular}{ll} Vector 3 & Bezier Curve. Get Direction ( \\ & float t) & [inline] \end{tabular}
```

## 5.1.1.2 GetPoint()

```
\begin{tabular}{lll} Vector 3 & Bezier Curve. Get Point ( & float $t$ ) & [in line] \end{tabular}
```

## 5.1.1.3 GetVelocity()

```
\begin{tabular}{lll} Vector 3 & Bezier Curve. Get Velocity ( \\ & & float t ) & [in line] \end{tabular}
```

## 5.1.1.4 Reset()

```
void BezierCurve.Reset ( ) [inline]
```

## 5.1.2 Member Data Documentation

#### 5.1.2.1 points

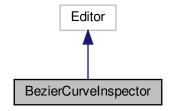
Vector3 [] BezierCurve.points

The documentation for this class was generated from the following file:

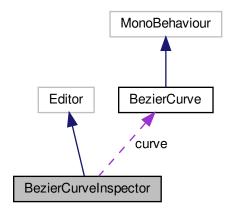
 $\bullet \ / root/Documents/Unity\_ST40/Suratram\_mixedRealitySimulator/Assets/Scripts/Bezier/BezierCurve.cs$ 

## 5.2 BezierCurveInspector Class Reference

Inheritance diagram for BezierCurveInspector:



Collaboration diagram for BezierCurveInspector:



## **Private Member Functions**

- void OnSceneGUI ()
- void ShowDirections ()
- Vector3 ShowPoint (int index)

## **Private Attributes**

- const int lineSteps = 10
- BezierCurve curve
- Transform handleTransform
- Quaternion handleRotation
- const float directionScale = 0.5f

## 5.2.1 Member Function Documentation

```
5.2.1.1 OnSceneGUI()
```

```
void BezierCurveInspector.OnSceneGUI ( ) [inline], [private]
```

## 5.2.1.2 ShowDirections()

```
void BezierCurveInspector.ShowDirections ( ) [inline], [private]
```

## 5.2.1.3 ShowPoint()

## 5.2.2 Member Data Documentation

#### 5.2.2.1 curve

```
BezierCurve BezierCurveInspector.curve [private]
```

## 5.2.2.2 directionScale

```
const float BezierCurveInspector.directionScale = 0.5f [private]
```

#### 5.2.2.3 handleRotation

Quaternion BezierCurveInspector.handleRotation [private]

#### 5.2.2.4 handleTransform

Transform BezierCurveInspector.handleTransform [private]

## 5.2.2.5 lineSteps

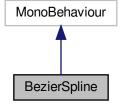
const int BezierCurveInspector.lineSteps = 10 [private]

The documentation for this class was generated from the following file:

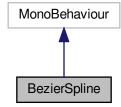
/root/Documents/Unity\_ST40/Suratram\_mixedRealitySimulator/Assets/Scripts/Bezier/Editor/BezierCurve←
Inspector.cs

## 5.3 BezierSpline Class Reference

Inheritance diagram for BezierSpline:



Collaboration diagram for BezierSpline:



## **Public Member Functions**

- Vector3 GetPoint (float t)
- Vector3 GetVelocity (float t)
- Vector3 GetDirection (float t)
- void AddCurve ()
- void Reset ()
- Vector3 GetControlPoint (int index)
- void SetControlPoint (int index, Vector3 point)
- BezierControlPointMode GetControlPointMode (int index)
- · void SetControlPointMode (int index, BezierControlPointMode mode)

## **Properties**

- bool Loop [get, set]
- int CurveCount [get]
- int ControlPointCount [get]

#### **Private Member Functions**

• void EnforceMode (int index)

## **Private Attributes**

- Vector3 [] points
- BezierControlPointMode [] modes
- bool loop

#### 5.3.1 Member Function Documentation

## 5.3.1.1 AddCurve()

```
void BezierSpline.AddCurve ( ) [inline]
```

## 5.3.1.2 EnforceMode()

```
void BezierSpline.EnforceMode (
          int index ) [inline], [private]
```

#### 5.3.1.3 GetControlPoint()

#### 5.3.1.4 GetControlPointMode()

```
BezierControlPointMode BezierSpline.GetControlPointMode (
    int index ) [inline]
```

## 5.3.1.5 GetDirection()

```
Vector3 BezierSpline.GetDirection ( float t ) [inline]
```

#### 5.3.1.6 GetPoint()

```
\begin{tabular}{ll} Vector 3 & Bezier Spline. Get Point ( \\ & float & t \end{tabular} ) & [in line] \end{tabular}
```

## 5.3.1.7 GetVelocity()

```
\begin{tabular}{ll} \beg
```

## 5.3.1.8 Reset()

```
void BezierSpline.Reset ( ) [inline]
```

#### 5.3.1.9 SetControlPoint()

## 5.3.1.10 SetControlPointMode()

## 5.3.2 Member Data Documentation

## 5.3.2.1 loop

```
bool BezierSpline.loop [private]
```

## 5.3.2.2 modes

```
BezierControlPointMode [] BezierSpline.modes [private]
```

## 5.3.2.3 points

```
Vector3 [] BezierSpline.points [private]
```

## 5.3.3 Property Documentation

## 5.3.3.1 ControlPointCount

```
int BezierSpline.ControlPointCount [get]
```

## 5.3.3.2 CurveCount

```
int BezierSpline.CurveCount [get]
```

#### 5.3.3.3 Loop

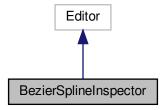
```
bool BezierSpline.Loop [get], [set]
```

The documentation for this class was generated from the following file:

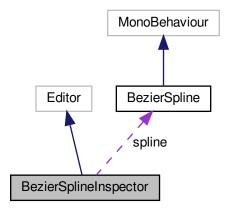
• /root/Documents/Unity\_ST40/Suratram\_mixedRealitySimulator/Assets/Scripts/Bezier/BezierSpline.cs

## 5.4 BezierSplineInspector Class Reference

Inheritance diagram for BezierSplineInspector:



Collaboration diagram for BezierSplineInspector:



## **Public Member Functions**

• override void OnInspectorGUI ()

## **Private Member Functions**

- void OnSceneGUI ()
- Vector3 ShowPoint (int index)
- void ShowDirections ()
- void DrawSelectedPointInspector ()

#### **Private Attributes**

- const int lineSteps = 10
- const float directionScale = 0.5f
- const int stepsPerCurve = 10
- const float handleSize = 0.04f
- const float pickSize = 0.06f
- int selectedIndex = -1
- BezierSpline spline
- Transform handleTransform
- Quaternion handleRotation

#### **Static Private Attributes**

• static Color [] modeColors

## 5.4.1 Member Function Documentation

## 5.4.1.1 DrawSelectedPointInspector()

```
void BezierSplineInspector.DrawSelectedPointInspector ( ) [inline], [private]
```

## 5.4.1.2 OnInspectorGUI()

```
override void BezierSplineInspector.OnInspectorGUI ( ) [inline]
```

## 5.4.1.3 OnSceneGUI()

```
void BezierSplineInspector.OnSceneGUI ( ) [inline], [private]
```

#### 5.4.1.4 ShowDirections()

```
void BezierSplineInspector.ShowDirections ( ) [inline], [private]
```

#### 5.4.1.5 ShowPoint()

## 5.4.2 Member Data Documentation

#### 5.4.2.1 directionScale

```
const float BezierSplineInspector.directionScale = 0.5f [private]
```

## 5.4.2.2 handleRotation

Quaternion BezierSplineInspector.handleRotation [private]

## 5.4.2.3 handleSize

```
const float BezierSplineInspector.handleSize = 0.04f [private]
```

## 5.4.2.4 handleTransform

 ${\tt Transform~BezierSplineInspector.handleTransform~[private]}$ 

## 5.4.2.5 lineSteps

```
const int BezierSplineInspector.lineSteps = 10 [private]
```

## 5.4.2.6 modeColors

```
Color [] BezierSplineInspector.modeColors [static], [private]
```

## Initial value:

```
Color.white,
Color.yellow,
Color.cyan
```

## 5.4.2.7 pickSize

```
const float BezierSplineInspector.pickSize = 0.06f [private]
```

#### 5.4.2.8 selectedIndex

```
int BezierSplineInspector.selectedIndex = -1 [private]
```

## 5.4.2.9 spline

```
BezierSpline BezierSplineInspector.spline [private]
```

## 5.4.2.10 stepsPerCurve

```
const int BezierSplineInspector.stepsPerCurve = 10 [private]
```

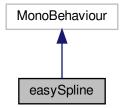
The documentation for this class was generated from the following file:

/root/Documents/Unity\_ST40/Suratram\_mixedRealitySimulator/Assets/Scripts/Bezier/Editor/BezierSpline←
 Inspector.cs

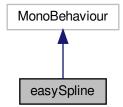
## 5.5 easySpline Class Reference

Interface to adapt the size of the Spline.

Inheritance diagram for easySpline:



Collaboration diagram for easySpline:



## **Public Attributes**

• float x = 1

Length in x

float z = 1

Length in z

const float bordersFactorX = 0.9f

Ratio of x-coordinate borders. Only the bordersFactorX-th will be used.

• const float bordersFactorZ = 0.9f

Ratio of y-coordinate borders. Only the bordersFactorZ-th will be used.

## **Private Member Functions**

• void Start ()

Resize the Spline at the start of the simulation.

## **Private Attributes**

• const float lengthSplineX = 5.770f

X ratio used to resize the Spline at the requested size. Do not modify

• const float lengthSplineZ = 2.44f

Z ratio used to resize the Spline at the requested size. Do not modify

## 5.5.1 Detailed Description

Interface to adapt the size of the Spline.

#### 5.5.2 Member Function Documentation

#### 5.5.2.1 Start()

```
void easySpline.Start ( ) [inline], [private]
```

Resize the Spline at the start of the simulation.

#### 5.5.3 Member Data Documentation

#### 5.5.3.1 bordersFactorX

```
const float easySpline.bordersFactorX = 0.9f
```

Ratio of x-coordinate borders. Only the bordersFactorX-th will be used.

#### 5.5.3.2 bordersFactorZ

```
const float easySpline.bordersFactorZ = 0.9f
```

Ratio of y-coordinate borders. Only the bordersFactorZ-th will be used.

## 5.5.3.3 lengthSplineX

```
const float easySpline.lengthSplineX = 5.770f [private]
```

X ratio used to resize the Spline at the requested size. Do not modify

## 5.5.3.4 lengthSplineZ

```
const float easySpline.lengthSplineZ = 2.44f [private]
```

Z ratio used to resize the Spline at the requested size. Do not modify

#### 5.5.3.5 x

```
float easySpline.x = 1
```

Length in x

## 5.5.3.6 z

```
float easySpline.z = 1
```

## Length in z

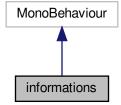
The documentation for this class was generated from the following file:

• /root/Documents/Unity\_ST40/Suratram\_mixedRealitySimulator/Assets/Scripts/Bezier/easySpline.cs

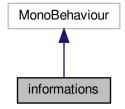
## 5.6 informations Class Reference

Class that displays some general informations on a Text component.

Inheritance diagram for informations:



## Collaboration diagram for informations:



#### **Public Attributes**

float samplingPeriod = 1
 The time needed for a refresh

## **Private Member Functions**

• void Start ()

Initialization function.

• void FixedUpdate ()

Updates the Text.

• void updateText (float vb, float ab, float vc, float ac, float interD)

Displays on the Text the text with parameters.

#### **Private Attributes**

· float timeStartSampling

An intern variable to store the time elapsed since the last refresh.

## 5.6.1 Detailed Description

Class that displays some general informations on a Text component.

## 5.6.2 Member Function Documentation

## 5.6.2.1 FixedUpdate()

void informations.FixedUpdate ( ) [inline], [private]

Updates the Text.

#### 5.6.2.2 Start()

```
void informations.Start ( ) [inline], [private]
```

Initialization function.

#### 5.6.2.3 updateText()

Displays on the Text the text with parameters.

#### **Parameters**

vb	The velocity of the bus.
ab	The acceleration of the bus.
VC	The velocity of the car.
ac	The acceleration of the car.
interD	The inter-distance between the two vehicles.

#### 5.6.3 Member Data Documentation

## 5.6.3.1 samplingPeriod

```
float informations.samplingPeriod = 1
```

The time needed for a refresh

## 5.6.3.2 timeStartSampling

```
float informations.timeStartSampling [private]
```

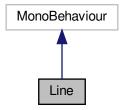
An intern variable to store the time elapsed since the last refresh.

The documentation for this class was generated from the following file:

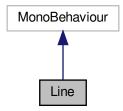
• /root/Documents/Unity\_ST40/Suratram\_mixedRealitySimulator/Assets/Scripts/Ul/informations.cs

## 5.7 Line Class Reference

Inheritance diagram for Line:



Collaboration diagram for Line:



## **Public Attributes**

• Vector3 p0

## **Private Attributes**

Vector3 p1

## 5.7.1 Member Data Documentation

## 5.7.1.1 p0

Vector3 Line.p0

#### 5.7.1.2 p1

```
Vector3 Line.p1 [private]
```

The documentation for this class was generated from the following file:

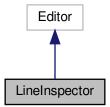
• /root/Documents/Unity\_ST40/Suratram\_mixedRealitySimulator/Assets/Scripts/Bezier/Line.cs

## 5.8 LineInspector Class Reference

Inheritance diagram for LineInspector:



Collaboration diagram for LineInspector:



## **Private Member Functions**

• void OnSceneGUI ()

## 5.8.1 Member Function Documentation

## 5.8.1.1 OnSceneGUI()

```
void LineInspector.OnSceneGUI ( ) [inline], [private]
```

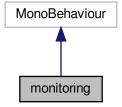
The documentation for this class was generated from the following file:

/root/Documents/Unity\_ST40/Suratram\_mixedRealitySimulator/Assets/Scripts/Bezier/Editor/LineInspector. ← cs

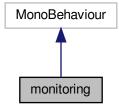
## 5.9 monitoring Class Reference

This class monitors, by retrieving differents informations in the scene.

Inheritance diagram for monitoring:



Collaboration diagram for monitoring:



## **Public Attributes**

• float samplingPeriod = 1

The time for every value update

#### **Properties**

• static float velocityBus [get, private set]

The velocity of the bus obtained after the data has been filtered.

• static float velocityCar [get, private set]

The velocity of the car obtained after the data has been filtered.

static float accelerationBus [get, private set]

The acceleration of the bus obtained after the data has been filtered.

• static float accelerationCar [get, private set]

The acceleration of the car obtained after the data has been filtered.

• static float interDistance [get, private set]

The inter-distance obtained after the data has been filtered.

## **Private Member Functions**

• void Start ()

Initialisation of the class.

void FixedUpdate ()

Function that updates every frame the data. And every 'samplingPeriod' it publishs the filtered data in public variables.

float average (float[] arr, int indexSampling)

Function that computes the average of the indexSampling-th elements of a float array.

Vector3 average (Vector3[] arr, int indexSampling)

Function that computes the average of the indexSampling-th elements of a Vector3 array.

void arrayShiftRight
 T > (T[] arr)

Function that shifts every element of a array to the right.

### **Private Attributes**

const int nbDataMax = 10000

The max number of data informations that can be stored.

float timeStartSampling

Variable to store the elapsed time since the last data merge.

· int indexSampling

The current number of data sample that has been gathered but not merged.

• Vector3 [] posBus

The raw data of bus positon. Filled over time.

Vector3 [] posCar

The raw data of car positon. Filled over time.

float [] velocityBusArr

The raw data of bus velocity. Filled over time.

float [] velocityCarArr

The raw data of car velocity. Filled over time.

float [] accelerationBusArr

The raw data of bus acceleration. Filled over time.

float [] accelerationCarArr

The raw data of car acceleration. Filled over time.

float [] interDistanceArr

The raw data of the inter-distance. Filled over time.

double [] arrayDeltaTime

The raw data of the time elapsed between every sample. Filled over time.

## 5.9.1 Detailed Description

This class monitors, by retrieving differents informations in the scene.

#### 5.9.2 Member Function Documentation

```
5.9.2.1 arrayShiftRight< T >()
```

Function that shifts every element of a array to the right.

#### **Parameters**

```
arr Source array of elements, type of template T
```

Initialize the 0-th element with the default T value.

```
5.9.2.2 average() [1/2]
```

Function that computes the average of the indexSampling-th elements of a float array.

## **Parameters**

```
arr The float array source
```

## Returns

The average value

### **5.9.2.3** average() [2/2]

Function that computes the average of the indexSampling-th elements of a Vector3 array.

#### **Parameters**

arr The Vector3 array source

#### Returns

The average value, stored in a Vector3

## 5.9.2.4 FixedUpdate()

```
void monitoring.FixedUpdate ( ) [inline], [private]
```

Function that updates every frame the data. And every 'samplingPeriod' it publishs the filtered data in public variables.

#### 5.9.2.5 Start()

```
void monitoring.Start ( ) [inline], [private]
```

Initialisation of the class.

## 5.9.3 Member Data Documentation

## 5.9.3.1 accelerationBusArr

```
float [] monitoring.accelerationBusArr [private]
```

The raw data of bus acceleration. Filled over time.

## 5.9.3.2 accelerationCarArr

```
float [] monitoring.accelerationCarArr [private]
```

The raw data of car acceleration. Filled over time.

#### 5.9.3.3 arrayDeltaTime

```
double [] monitoring.arrayDeltaTime [private]
```

The raw data of the time elapsed between every sample. Filled over time.

#### 5.9.3.4 indexSampling

```
int monitoring.indexSampling [private]
```

The current number of data sample that has been gathered but not merged.

#### 5.9.3.5 interDistanceArr

```
float [] monitoring.interDistanceArr [private]
```

The raw data of the inter-distance. Filled over time.

## 5.9.3.6 nbDataMax

```
const int monitoring.nbDataMax = 10000 [private]
```

The max number of data informations that can be stored.

## 5.9.3.7 posBus

```
Vector3 [] monitoring.posBus [private]
```

The raw data of bus positon. Filled over time.

## 5.9.3.8 posCar

```
Vector3 [] monitoring.posCar [private]
```

The raw data of car positon. Filled over time.

#### 5.9.3.9 samplingPeriod

```
float monitoring.samplingPeriod = 1
```

The time for every value update

## 5.9.3.10 timeStartSampling

```
float monitoring.timeStartSampling [private]
```

Variable to store the elapsed time since the last data merge.

## 5.9.3.11 velocityBusArr

```
float [] monitoring.velocityBusArr [private]
```

The raw data of bus velocity. Filled over time.

#### 5.9.3.12 velocityCarArr

```
float [] monitoring.velocityCarArr [private]
```

The raw data of car velocity. Filled over time.

#### 5.9.4 Property Documentation

### 5.9.4.1 accelerationBus

```
float monitoring.accelerationBus [static], [get], [private set]
```

The acceleration of the bus obtained after the data has been filtered.

#### 5.9.4.2 accelerationCar

```
float monitoring.accelerationCar [static], [get], [private set]
```

The acceleration of the car obtained after the data has been filtered.

## 5.9.4.3 interDistance

```
float monitoring.interDistance [static], [get], [private set]
```

The inter-distance obtained after the data has been filtered.

## 5.9.4.4 velocityBus

```
float monitoring.velocityBus [static], [get], [private set]
```

The velocity of the bus obtained after the data has been filtered.

#### 5.9.4.5 velocityCar

```
float monitoring.velocityCar [static], [get], [private set]
```

The velocity of the car obtained after the data has been filtered.

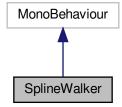
The documentation for this class was generated from the following file:

• /root/Documents/Unity\_ST40/Suratram\_mixedRealitySimulator/Assets/Scripts/monitoring.cs

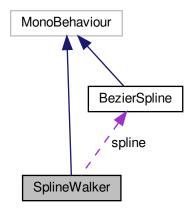
## 5.10 SplineWalker Class Reference

Class that handles the movements a Vehicle on a Spline.

Inheritance diagram for SplineWalker:



Collaboration diagram for SplineWalker:



#### **Public Attributes**

· BezierSpline spline

The Spline to follow

• bool isFollowing = false

Is the GameObject following another one.

bool isDriving

Is the GameObject using a realistic method to move.

· float velocity

Speed of the GameObject when controls are not handled by the driving car controller.

· GameObject followsGameObject

If isFollowing is enabled, this is the GameObject to follow.

• float distanceFollowing = 15f

The wanted interdistance between the two GameObject. Only needed for the follower.

## **Properties**

• float progress [get, private set]

The progress of the GameObject over the Spline. Range from 0 to 1 in float.

#### **Private Member Functions**

• void Start ()

Initialization of the class

void FixedUpdate ()

Updates the path every frame.

• float findNearestPointInSpline ()

Find the nearest progress point from the leader GameObject in the spline.

void lookForward (float lookingDistance)

Force the GameObject to look forward the Spline.

#### **Private Attributes**

CarController m\_Car

The realistic controller.

• const float sampling = 100

Discretisation of intervals.

## 5.10.1 Detailed Description

Class that handles the movements a Vehicle on a Spline.

https://catlikecoding.com/unity/tutorials/curves-and-splines/

## 5.10.2 Member Function Documentation

#### 5.10.2.1 findNearestPointInSpline()

```
float SplineWalker.findNearestPointInSpline ( ) [inline], [private]
```

Find the nearest progress point from the leader GameObject in the spline.

## Returns

The value of progress.

## 5.10.2.2 FixedUpdate()

```
void SplineWalker.FixedUpdate ( ) [inline], [private]
```

Updates the path every frame.

#### 5.10.2.3 lookForward()

Force the GameObject to look forward the Spline.

#### **Parameters**

lookingDistance	The distance the GameObject will look next on the spline. Can't be higher than the two
	extremities distance.

#### Returns

The value of progress.

#### 5.10.2.4 Start()

```
void SplineWalker.Start ( ) [inline], [private]
```

Initialization of the class

#### 5.10.3 Member Data Documentation

## 5.10.3.1 distanceFollowing

```
float SplineWalker.distanceFollowing = 15f
```

The wanted interdistance between the two GameObject. Only needed for the follower.

## 5.10.3.2 followsGameObject

```
GameObject SplineWalker.followsGameObject
```

If isFollowing is enabled, this is the GameObject to follow.

## 5.10.3.3 isDriving

```
bool SplineWalker.isDriving
```

Is the GameObject using a realistic method to move.

#### 5.10.3.4 isFollowing

```
bool SplineWalker.isFollowing = false
```

Is the GameObject following another one.

#### 5.10.3.5 m\_Car

```
CarController SplineWalker.m_Car [private]
```

The realistic controller.

#### 5.10.3.6 sampling

```
const float SplineWalker.sampling = 100 [private]
```

Discretisation of intervals.

#### 5.10.3.7 spline

```
BezierSpline SplineWalker.spline
```

The Spline to follow

#### 5.10.3.8 velocity

```
float SplineWalker.velocity
```

Speed of the GameObject when controls are not handled by the driving car controller.

## 5.10.4 Property Documentation

#### 5.10.4.1 progress

```
float SplineWalker.progress [get], [private set]
```

The progress of the GameObject over the Spline. Range from 0 to 1 in float.

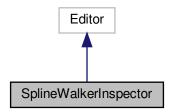
The documentation for this class was generated from the following file:

/root/Documents/Unity\_ST40/Suratram\_mixedRealitySimulator/Assets/Scripts/Bezier/SplineWalker.cs

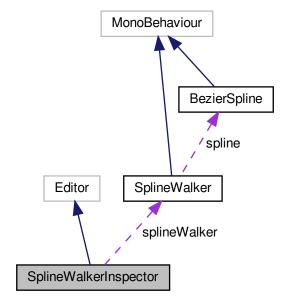
## 5.11 SplineWalkerInspector Class Reference

Class that format the SplineWalker settings to a more user-friendly one.

Inheritance diagram for SplineWalkerInspector:



Collaboration diagram for SplineWalkerInspector:



#### **Public Member Functions**

override void OnInspectorGUI ()
 Updates the GUI

## **Private Attributes**

• SplineWalker splineWalker

The SplineWalker that will be modified with the GUI.

## 5.11.1 Detailed Description

Class that format the SplineWalker settings to a more user-friendly one.

#### 5.11.2 Member Function Documentation

#### 5.11.2.1 OnInspectorGUI()

```
override void SplineWalkerInspector.OnInspectorGUI ( ) [inline]
```

Updates the GUI

## 5.11.3 Member Data Documentation

## 5.11.3.1 splineWalker

```
SplineWalker SplineWalkerInspector.splineWalker [private]
```

The SplineWalker that will be modified with the GUI.

The documentation for this class was generated from the following file:

/root/Documents/Unity\_ST40/Suratram\_mixedRealitySimulator/Assets/Scripts/Bezier/Editor/SplineWalker←
 Inspector.cs

## **Chapter 6**

## **File Documentation**



#### Classes

- · class Bezier
- 6.2 /root/Documents/Unity\_ST40/Suratram\_mixedRealitySimulator/Assets/Scripts/

  Bezier/BezierControlPointMode.cs File Reference

#### **Enumerations**

- enum BezierControlPointMode { BezierControlPointMode.Free, BezierControlPointMode.Aligned, Bezier←
   ControlPointMode.Mirrored }
- **6.2.1 Enumeration Type Documentation**
- 6.2.1.1 BezierControlPointMode

enum BezierControlPointMode [strong]

## Enumerator

Free	
Aligned	
Mirrored	

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6.3 /root/Documents/Unity\_ST40/Suratram\_mixedRealitySimulator/Assets/Scripts/

Bezier/BezierCurve.cs File Reference

#### Classes

- class BezierCurve
- 6.4 /root/Documents/Unity\_ST40/Suratram\_mixedRealitySimulator/Assets/Scripts/

  Bezier/BezierSpline.cs File Reference

#### Classes

- · class BezierSpline
- 6.5 /root/Documents/Unity\_ST40/Suratram\_mixedRealitySimulator/Assets/Scripts/

  Bezier/easySpline.cs File Reference

#### Classes

- class easySpline
  Interface to adapt the size of the Spline.
- 6.6 /root/Documents/Unity\_ST40/Suratram\_mixedRealitySimulator/Assets/Scripts/

  Bezier/Editor/BezierCurveInspector.cs File Reference

#### Classes

- class BezierCurveInspector
- 6.7 /root/Documents/Unity\_ST40/Suratram\_mixedRealitySimulator/Assets/Scripts/

  Bezier/Editor/BezierSplineInspector.cs File Reference

#### **Classes**

- class BezierSplineInspector
- 6.8 /root/Documents/Unity\_ST40/Suratram\_mixedRealitySimulator/Assets/Scripts/

  Bezier/Editor/LineInspector.cs File Reference

#### Classes

class LineInspector

6.9 /root/Documents/Unity_ST40/Suratram_mixedRealitySimulator/Assets/Scripts/Bezier/Editor/Spline ← WalkerInspector.cs File Reference 6.9 /root/Documents/Unity_ST40/Suratram_mixedRealitySimulator/Assets/Scripts/ ← Bezier/Editor/SplineWalkerInspector.cs File Reference			
Classe	es e		
• (	class SplineWalkerInspector  Class that format the SplineWalker settings to a more user-friendly one.		
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Classe	es es		
• (	class Line		
6.11	/root/Documents/Unity_ST40/Suratram_mixedRealitySimulator/Assets/Scripts/ Bezier/SplineWalker.cs File Reference		
Classe	es es		
• (	Class SplineWalker  Class that handles the movements a Vehicle on a Spline.		
6.12	/root/Documents/Unity_ST40/Suratram_mixedRealitySimulator/Assets/Scripts/monitoring.cs		
Classe	es s		
• (	class monitoring  This class monitors, by retrieving differents informations in the scene.		
6.13	/root/Documents/Unity_ST40/Suratram_mixedRealitySimulator/Assets/Scripts/U⊸ l/informations.cs File Reference		
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• (	class informations		

6.14

Class that displays some general informations on a Text component.

mainpage.doc File Reference

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