Mesh Exploder

1.0.0

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Chapter 1

Namespace Index

1.1 Package List

Here are the packages with brief descriptions (if available):

SBS 7
SBS.ME 7

Chapter 2

Hierarchical Index

2.1 Class Hierarchy

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

MonoBehaviour
SBS.ME.MeshExploder 10
ScriptableObject
SBS.ME.GuideSO 9

Chapter 3

Class Index

3.1 Class List

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

SBS.ME.GuideSO 9
SBS.ME.MeshExploder 10

Chapter 4

Namespace Documentation

4.1 SBS Namespace Reference

Namespaces

- namespace ME

4.2 SBS.ME Namespace Reference

Classes

- class GuideSO
- class MeshExploder

Enumerations

- enum ExplosionOrigin { center , pivot , offset }
- enum ColliderType { BoxCollider , MeshCollider }

4.2.1 Enumeration Type Documentation

4.2.1.1 ColliderType

```
enum SBS.ME.ColliderType
```

Enumerator

BoxCollider	
MeshCollider	

4.2.1.2 ExplosionOrigin

enum SBS.ME.ExplosionOrigin

Enumerator

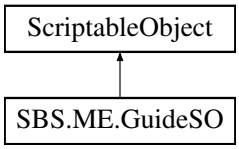
center	
pivot	
offset	

Chapter 5

Class Documentation

5.1 SBS.ME.GuideSO Class Reference

Inheritance diagram for SBS.ME.GuideSO:



Public Attributes

- string nameAndVer = "MESH EXPLODER"
- string smallName = "Mesh Exploder"
- string docs = ""
- string onlineDocs = ""
- string tuts = ""
- string forum = ""
- string mail = "smallbigsquare@gmail.com"
- string rate = "https://assetstore.unity.com/packages/slug/307984"
- string pub = "https://assetstore.unity.com/publishers/90279"

5.1.1 Member Data Documentation

5.1.1.1 docs

```
string SBS.ME.GuideSO.docs = ""
```

5.1.1.2 forum

```
string SBS.ME.GuideSO.forum = ""
```

5.1.1.3 mail

```
string SBS.ME.GuideSO.mail = "smallbigsquare@gmail.com"
```

5.1.1.4 nameAndVer

```
string SBS.ME.GuideSO.nameAndVer = "MESH EXPLODER"
```

5.1.1.5 onlineDocs

```
string SBS.ME.GuideSO.onlineDocs = ""
```

5.1.1.6 pub

```
string SBS.ME.GuideSO.pub = "https://assetstore.unity.com/publishers/90279"
```

5.1.1.7 rate

```
string SBS.ME.GuideSO.rate = "https://assetstore.unity.com/packages/slug/307984"
```

5.1.1.8 smallName

```
string SBS.ME.GuideSO.smallName = "Mesh Exploder"
```

5.1.1.9 tuts

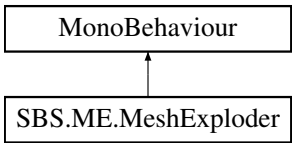
```
string SBS.ME.GuideSO.tuts = ""
```

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

- GuideSO.cs

5.2 SBS.ME.MeshExploder Class Reference

Inheritance diagram for SBS.ME.MeshExploder:



Public Member Functions

- void DESTROY ()

  Destroys this object and all parts created by it.
- void moveTrianglesInMesh ()

  Animates mesh triangles in the explosion.
- Mesh retriangulateMesh (Mesh mesh)

  It creates new mesh from existing one but it creates multiple vertices so each triangle will have its own set of vertices.
- void explodeMesh (Mesh mesh)

  It creates direction vectors, they will be used to move triangles.
- void EXPLODE ()

  Call this method or set explode variable to true to explode this mesh.

Public Attributes

- bool explodeNOW = false
- bool recalculteNormals = true
- bool recalculateTangents = false
- bool recalculateBounds = false
- bool createGameObjects = false
- float probabilityOfCreatingAnObject = 1
- ColliderType colliderAttached = ColliderType.MeshCollider
- bool useNormalsAsExplosionDirection = false
- ExplosionOrigin explosionOrigin
- Vector3 ExplosionOffset = Vector3.zero
- bool normalizeDirection = true
- float explosionInitSpeed = 1
- Vector3 gravity = Vector3.zero
- float friction = 0.99f
- bool doubleSided = true
- float flipSideDistance = 0.001f
- float explosionTime = 1
- bool destroyObjectAfterExplosion = true
- UnityEvent< GameObject, Vector3 > onExplosionStarted
- UnityEvent< List< GameObject > > onPartsCreated
- UnityEvent onExplosionFinished

Private Member Functions

- void Awake ()
- void Update ()
- Vector3 CalculateGlobalScaleRecursive (Transform transform)

  finds scale of the child object
- void OnValidate ()

Private Attributes

- Mesh newMesh
- bool explosionFinished = false
- float currentTime = 0
- bool recalculated = false
- MeshFilter filter
- MeshRenderer MR
- List< GameObject > createdGameObjectTriangles
- Vector3[ ] directions
- Vector3[ ] centers
- Vector3 centerPoint = Vector3.zero

5.2.1 Member Function Documentation

5.2.1.1 Awake()

```
void SBS.ME.MeshExploder.Awake ( )  [private]
```

5.2.1.2 CalculateGlobalScaleRecursive()

```
Vector3 SBS.ME.MeshExploder.CalculateGlobalScaleRecursive (
            Transform transform )  [private]
```

finds scale of the child object

Parameters

transform	

Returns

Calculated scale

5.2.1.3 DESTROY()

```
void SBS.ME.MeshExploder.DESTROY ( )
```

Destroys this object and all parts created by it.

5.2.1.4 EXPLODE()

```
void SBS.ME.MeshExploder.EXPLODE ( )
```

Call this method or set explode variable to true to explode this mesh.

5.2.1.5 explodeMesh()

```
void SBS.ME.MeshExploder.explodeMesh (
            Mesh mesh )
```

It creates direction vectors, they will be used to move triangles.

5.2.1.6 moveTrianglesInMesh()

```
void SBS.ME.MeshExploder.moveTrianglesInMesh ( )
```

Animates mesh triangles in the explosion.

5.2.1.7 OnValidate()

```
void SBS.ME.MeshExploder.OnValidate ( )  [private]
```

5.2.1.8 retriangulateMesh()

```
Mesh SBS.ME.MeshExploder.retriangulateMesh (
            Mesh mesh )
```

It creates new mesh from existing one but it creates multiple vertices so each triangle will have its own set of vertices.

Returns

new retriangulated mesh

5.2.1.9 Update()

```
void SBS.ME.MeshExploder.Update ( )  [private]
```

5.2.2 Member Data Documentation

5.2.2.1 centerPoint

```
Vector3 SBS.ME.MeshExploder.centerPoint = Vector3.zero  [private]
```

5.2.2.2 centers

```
Vector3 [] SBS.ME.MeshExploder.centers  [private]
```

5.2.2.3 colliderAttached

```
ColliderType SBS.ME.MeshExploder.colliderAttached = ColliderType.MeshCollider
```

5.2.2.4 createdGameObjectTriangles

```
List<GameObject> SBS.ME.MeshExploder.createdGameObjectTriangles  [private]
```

5.2.2.5 createGameObjects

```
bool SBS.ME.MeshExploder.createGameObjects = false
```

5.2.2.6 currentTime

```
float SBS.ME.MeshExploder.currentTime = 0  [private]
```

5.2.2.7 destroyObjectAfterExplosion

```
bool SBS.ME.MeshExploder.destroyObjectAfterExplosion = true
```

5.2.2.8 directions

```
Vector3 [] SBS.ME.MeshExploder.directions  [private]
```

5.2.2.9 doubleSided

```
bool SBS.ME.MeshExploder.doubleSided = true
```

5.2.2.10 explodeNOW

```
bool SBS.ME.MeshExploder.explodeNOW = false
```

5.2.2.11 explosionFinished

```
bool SBS.ME.MeshExploder.explosionFinished = false  [private]
```

5.2.2.12 explosionInitSpeed

```
float SBS.ME.MeshExploder.explosionInitSpeed = 1
```

5.2.2.13 ExplosionOffset

```
Vector3 SBS.ME.MeshExploder.ExplosionOffset = Vector3.zero
```

5.2.2.14 explosionOrigin

```
ExplosionOrigin SBS.ME.MeshExploder.explosionOrigin
```

5.2.2.15 explosionTime

```
float SBS.ME.MeshExploder.explosionTime = 1
```

5.2.2.16 filter

```
MeshFilter SBS.ME.MeshExploder.filter  [private]
```

5.2.2.17 flipSideDistance

```
float SBS.ME.MeshExploder.flipSideDistance = 0.001f
```

5.2.2.18 friction

```
float SBS.ME.MeshExploder.friction = 0.99f
```

5.2.2.19 gravity

```
Vector3 SBS.ME.MeshExploder.gravity = Vector3.zero
```

5.2.2.20 MR

```
MeshRenderer SBS.ME.MeshExploder.MR  [private]
```

5.2.2.21 newMesh

```
Mesh SBS.ME.MeshExploder.newMesh  [private]
```

5.2.2.22 normalizeDirection

```
bool SBS.ME.MeshExploder.normalizeDirection = true
```

5.2.2.23 onExplosionFinished

```
UnityEvent SBS.ME.MeshExploder.onExplosionFinished
```

5.2.2.24 onExplosionStarted

```
UnityEvent<GameObject, Vector3> SBS.ME.MeshExploder.onExplosionStarted
```

5.2.2.25 onPartsCreated

```
UnityEvent<List<GameObject> > SBS.ME.MeshExploder.onPartsCreated
```

5.2.2.26 probabilityOfCreatingAnObject

```
float SBS.ME.MeshExploder.probabilityOfCreatingAnObject = 1
```

5.2.2.27 recalculateBounds

```
bool SBS.ME.MeshExploder.recalculateBounds = false
```

5.2.2.28 recalculated

```
bool SBS.ME.MeshExploder.recalculated = false  [private]
```

5.2.2.29 recalculateTangents

```
bool SBS.ME.MeshExploder.recalculateTangents = false
```

5.2.2.30 recalculteNormals

```
bool SBS.ME.MeshExploder.recalculteNormals = true
```

5.2.2.31 useNormalsAsExplosionDirection

```
bool SBS.ME.MeshExploder.useNormalsAsExplosionDirection = false
```

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

- MeshExploder.cs

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