Rage BML Realizer

1.0

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- class RageBMLRealizer

  An BMLRealizer Rage asset
- class RageBMLRealizerSettings

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Classes

- class BMLBehavior

  BML behavior class. all behavior need to derived from this class
- class BMLBlock

  abstract class of BML block all block need to be derived from this class
- class BMLBml
- class BMLFace

  Compound behavior to specify the timing and alignment of several (partial) face expressions as one unit.
- class BMLFaceFacs

  This behavior provides control of the face through single Action Units from the Facial Action Coding Scheme. It is an Core Extension, that is, not every BML Compliant Realizer has to implement this behavior, but if a Realizer offers FACS based face control, they should adhere to the specification of this <faceFacs> behavior
- class BMLFaceLexeme

  Show a (partial) face expression from a predefined lexicon.
- class BMLFaceShift

  Compound behavior to specify the timing and alignment of several (partial) face expressions as one unit, where the specified compound face expression becomes the new BASE state of the ECAs face.
- class BMLFeedback
- class BMLGaze

  Temporarily directs the gaze of the character towards a target. This behavior causes the character to temporarily direct its gaze to the requested target. The influence parameter is read as follows: EYE means 'use only the eyes'; HEAD means 'use only head and eyes to change the gaze direction', etcetera.

- class BMLGazeShift

  Permanently change the gaze direction of the character towards a certain target. This behavior causes the character to direct its gaze to the requested target. This changes the default state of the ECA: after completing this behavior, the new target is the default gaze direction of the ECA. The influence parameter is read as follows: EYE means 'use only the eyes'; HEAD means 'use only head and eyes to change the gaze direction', etcetera.

- class BMLGesture

  Currently, BML offers two types of gesture behaviors. The first provides a set of gestures recalled by name from a gesticon; the second provides simple pointing gestures. Coordinated movement with arms and hands, recalled from a gesticon by requesting the corresponding lexeme

- class BMLHead

  Movement of the head, recalled from a gesticon by requesting the corresponding lexeme. Movement of the head, recalled from a gesticon by requesting the corresponding lexeme. The stroke phase of the head motion (from stroke↩ Start till strokeEnd is the "meaningful" part of the head motion. The stroke sync point is the "peak" moment of the motion. If repetition > 1, the meaning of the stroke sync point becomes undefined

- class BMLHeadDirectionShift

  Orient the head towards a target referenced by the target attribute. Permanently orient the head in a certain direction.

- class BMLLocomotion

  Move the body of the character from one location to another. This behavior causes the character to move to the requested target in the manner described.

- class BMLPointing

  Deictic gesture towards the target specified by the target attribute

- class BMLPose

  Child element of <posture> and <postureShift> behaviors, defines additions to the global body posture of the ECA. Child element of <posture> and <postureShift> behaviors, defines additions that modify the global body posture of the ECA. For each value of the part attribute, only one <pose> child is expected to be present. A BML Realizer may define any number of lexemes beyond the ones specified above.

- class BMLPosture

  Temporarily change the posture of the ECA. Temporarily change the posture of the ECA. After the <posture> behavior has ended, return to the BASE posture.

- class BMLPostureShift

  Permanently change the BASE posture of the ECA.

- class BMLSpeech

  Utterance to be spoken by a character. Realization of the <speech> element generates both speech audio (or text) and speech movement, for example using a speech synthesizer and viseme morphing. The<speech> element requires a sub-element.This sub-element is a<text> element that contains the text to be spoken, with optionally embedded<sync> elements for alignment with other behaviors.

- class BMLStance

  Child element of <posture> and <postureShift> behaviors, defines global body posture of the ECA. Child element of <posture> and <postureShift> behaviors, defines global body posture of the ECA. This global posture may then be modified by one or more <pose> siblings.

- class BMLSyncPoint

  BML Sync Point class possible format: behavior_id:sync_id [+/- offset] A reference to a sync point of another behavior, optionally with a float offset in seconds. By default, this is a behavior in the same <bml> block that the syncref is contained in; if optional prefix block_id: is present, the syncref specifies a sync point of a behavior in the <bml> block with that ID.) offset: A positive float offset in seconds relative to the start time of the surrounding <bml> block.

- class BMLWait

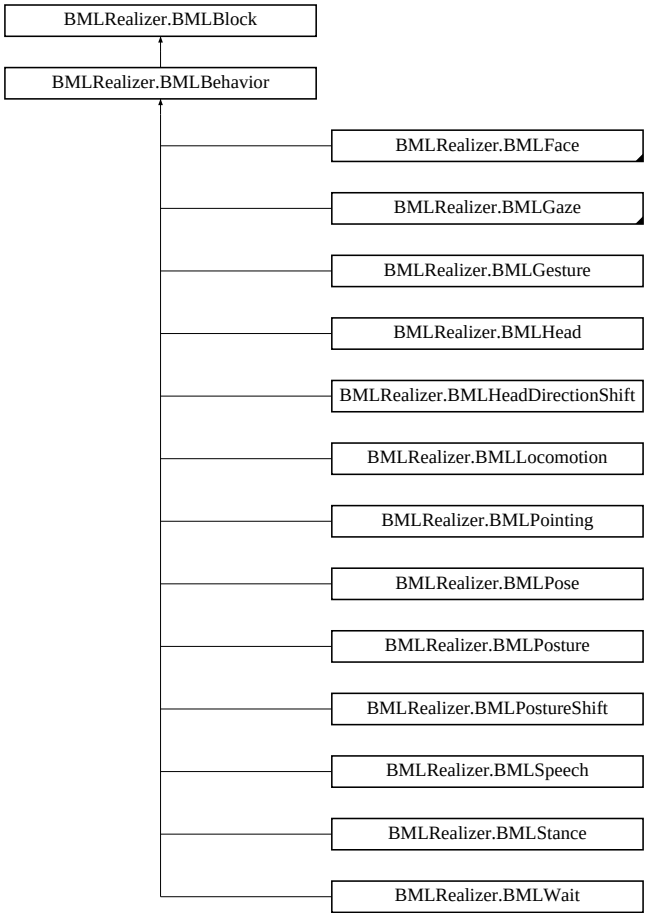
Chapter 5

Class Documentation

5.1 BMLRealizer.BMLBehavior Class Reference

BML behavior class. all behavior need to derived from this class

Inheritance diagram for BMLRealizer.BMLBehavior:



Public Member Functions

- BMLBehavior ()
  constructor
- override void Parse (XmlReader reader)
  parsing the xml atribute: id

Additional Inherited Members

5.1.1 Detailed Description

BML behavior class. all behavior need to derived from this class

Definition at line 25 of file BMLBehavior.cs.

5.1.2 Constructor & Destructor Documentation

5.1.2.1 BMLBehavior()

```
BMLRealizer.BMLBehavior.BMLBehavior ( )
```

constructor

Definition at line 31 of file BMLBehavior.cs.

5.1.3 Member Function Documentation

5.1.3.1 Parse()

```
override void BMLRealizer.BMLBehavior.Parse (
            XmlReader reader )  [virtual]
```

parsing the xml atribute: id

Parameters

reader	

Implements BMLRealizer.BMLBlock.

Reimplemented in BMLRealizer.BMLGaze, BMLRealizer.BMLPose, BMLRealizer.BMLFaceLexeme, BML↩Realizer.BMLGesture, BMLRealizer.BMLHead, BMLRealizer.BMLPointing, BMLRealizer.BMLFace, BMLRealizer.↩BMLLocomotion, BMLRealizer.BMLStance, BMLRealizer.BMLSpeech, BMLRealizer.BMLHeadDirectionShift, B↩MLRealizer.BMLGazeShift, BMLRealizer.BMLPosture, BMLRealizer.BMLWait, and BMLRealizer.BMLPostureShift.

Definition at line 40 of file BMLBehavior.cs.

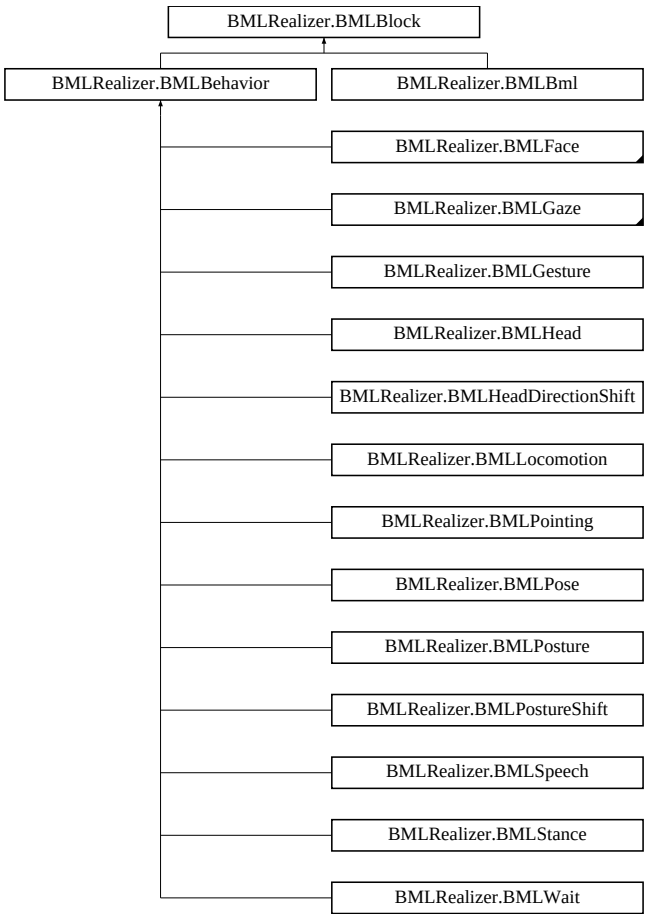
The documentation for this class was generated from the following file:

- C:/Users/Chris021/OneDrive - Universiteit Utrecht/project/rage/BML-Realizer/RageBMLRealizer/BML↩Realizer/BMLBehavior.cs

5.2 BMLRealizer.BMLBlock Class Reference

abstract class of BML block all block need to be derived from this class

Inheritance diagram for BMLRealizer.BMLBlock:



Public Member Functions

- BMLBlock ()

  empty constructor
- abstract void Parse (XmlReader reader)

  all child class need to implement their own parsing standard
- void **Dispose** ()
- String **getCharacterId** ()

Public Attributes

- string id

  Unique ID that allows referencing to a particular bml block. The id 'bml' is reserved.
- Dictionary< string, BMLSyncPoint > syncPoints = new Dictionary<string, BMLSyncPoint>()

  Sync Point collection of this block
- BMLBml parentBml

  parent bml tag

Protected Member Functions

- T TryParseAtribute< T > (XmlReader reader, string atributeName, T defaultValue, bool required=true)

  helper function to parse the atribute from XML
- bool TryParseSyncPoint (XmlReader reader, string eventName)

  helper function to parse the sync point attribute we do not need to check whether we found the atribute or not. The BMLSyncPoint class will use those value (null or not null).

5.2.1 Detailed Description

abstract class of BML block all block need to be derived from this class

Definition at line 31 of file BMLBlock.cs.

5.2.2 Constructor & Destructor Documentation

5.2.2.1 BMLBlock()

```
BMLRealizer.BMLBlock.BMLBlock ( )
```

empty constructor

Definition at line 52 of file BMLBlock.cs.

5.2.3 Member Function Documentation

5.2.3.1 Parse()

```
abstract void BMLRealizer.BMLBlock.Parse (
            XmlReader reader )  [pure virtual]
```

all child class need to implement their own parsing standard

Parameters

reader	

Implemented in BMLRealizer.BMLGaze, BMLRealizer.BMLPose, BMLRealizer.BMLBml, BMLRealizer.BMLFaceLexeme, BMLRealizer.BMLGesture, BMLRealizer.BMLHead, BMLRealizer.BMLPointing, BMLRealizer.BMLFace, BMLRealizer.BMLLocomotion, BMLRealizer.BMLStance, BMLRealizer.BMLSpeech, BMLRealizer.BMLHeadDirectionShift, BMLRealizer.BMLGazeShift, BMLRealizer.BMLPosture, BMLRealizer.BMLWait, BMLRealizer.BMLBehavior, and BMLRealizer.BMLPostureShift.

5.2.3.2 TryParseAtribute< T >()

```
T BMLRealizer.BMLBlock.TryParseAtribute< T > (
            XmlReader reader,
```

```
            string atributeName,
            T defaultValue,
            bool required = true )  [protected]
```

helper function to parse the atribute from XML

Template Parameters

T	

Parameters

reader	

XMLReader

Parameters

atributeName	

the atribute name that we need to parse

Parameters

defaultValue	

the value when we do not find the atribute

Parameters

required	

do you require this atribute or not ?

Returns

Definition at line 72 of file BMLBlock.cs.

5.2.3.3 TryParseSyncPoint()

```
bool BMLRealizer.BMLBlock.TryParseSyncPoint (
            XmlReader reader,
            string eventName )  [protected]
```

helper function to parse the sync point attribute we do not need to check whether we found the atribute or not. The BMLSyncPoint class will use those value (null or not null).

Parameters

reader	

XMLReader

Parameters

eventName	

the name of sync point (start, ready, strokeStart, attackPeak, stroke, strokeEnd, relax, end)

Returns

Definition at line 126 of file BMLBlock.cs.

5.2.4 Member Data Documentation

5.2.4.1 id

```
string BMLRealizer.BMLBlock.id
```

Unique ID that allows referencing to a particular bml block. The id 'bml' is reserved.

Definition at line 36 of file BMLBlock.cs.

5.2.4.2 parentBml

```
BMLBml BMLRealizer.BMLBlock.parentBml
```

parent bml tag

Definition at line 46 of file BMLBlock.cs.

5.2.4.3 syncPoints

```
Dictionary<string, BMLSyncPoint> BMLRealizer.BMLBlock.syncPoints = new Dictionary<string, B↩
MLSyncPoint>()
```

Sync Point collection of this block

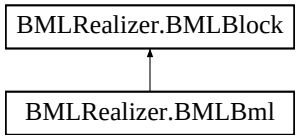
Definition at line 41 of file BMLBlock.cs.

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

- C:/Users/Chris021/OneDrive - Universiteit Utrecht/project/rage/BML-Realizer/RageBMLRealizer/BML↩ Realizer/BMLBlock.cs

5.3 BMLRealizer.BMLBml Class Reference

Inheritance diagram for BMLRealizer.BMLBml:



Public Types

- enum Composition { **MERGE**, **APPEND**, **REPLACE** }

  one among [MERGE,APPEND,REPLACE], defines the composition policy to apply if the current <bml> block overlaps with previous <bml> blocks (see below).

Public Member Functions

- BMLBml ()

  constructor
- override void Parse (XmlReader reader)

  parsing the xml
- void **SetGlobalStartTrigger** (string value)
- void **IncreaseChild** ()
- bool **IncreaseEndChild** ()

Public Attributes

- string characterId

  a reference towards the controlled character
- string **xmlns**
- Composition composition

  one among [MERGE,APPEND,REPLACE], defines the composition policy to apply if the current <bml> block overlaps with previous <bml> blocks (see below).

Additional Inherited Members

5.3.1 Detailed Description

Definition at line 25 of file BMLBml.cs.

5.3.2 Member Enumeration Documentation

5.3.2.1 Composition

```
enum BMLRealizer.BMLBml.Composition  [strong]
```

one among [MERGE,APPEND,REPLACE], defines the composition policy to apply if the current <bml> block overlaps with previous <bml> blocks (see below).

Definition at line 47 of file BMLBml.cs.

5.3.3 Constructor & Destructor Documentation

5.3.3.1 BMLBml()

```
BMLRealizer.BMLBml.BMLBml ( )
```

constructor

Definition at line 57 of file BMLBml.cs.

5.3.4 Member Function Documentation

5.3.4.1 Parse()

```
override void BMLRealizer.BMLBml.Parse (
            XmlReader reader )  [virtual]
```

parsing the xml

Parameters

reader	

Implements BMLRealizer.BMLBlock.

Definition at line 74 of file BMLBml.cs.

5.3.5 Member Data Documentation

5.3.5.1 characterId

```
string BMLRealizer.BMLBml.characterId
```

a reference towards the controlled character

Definition at line 31 of file BMLBml.cs.

5.3.5.2 composition

```
Composition BMLRealizer.BMLBml.composition
```

one among [MERGE,APPEND,REPLACE], defines the composition policy to apply if the current <bml> block overlaps with previous <bml> blocks (see below).

Definition at line 38 of file BMLBml.cs.

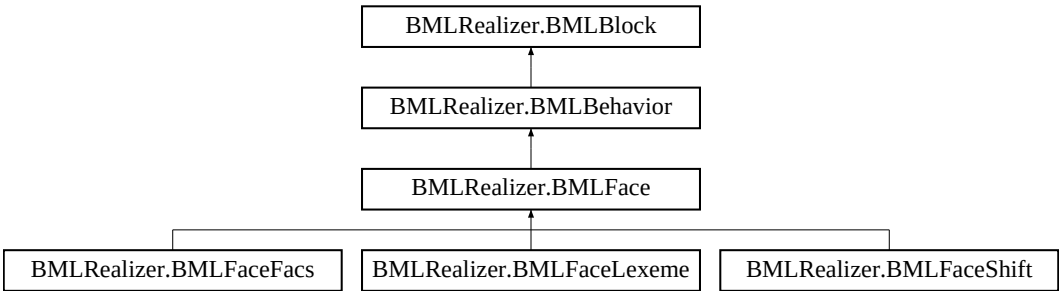
The documentation for this class was generated from the following file:

- C:/Users/Chris021/OneDrive - Universiteit Utrecht/project/rage/BML-Realizer/RageBMLRealizer/BML↩ Realizer/BMLBml.cs

5.4 BMLRealizer.BMLFace Class Reference

Compound behavior to specify the timing and alignment of several (partial) face expressions as one unit.

Inheritance diagram for BMLRealizer.BMLFace:



Public Member Functions

- BMLFace ()

  constructor
- override void Parse (XmlReader reader)

  parsing the xml atribute: id, amount, overshoot synx attribute: start, attackPeak, relax, end

Public Attributes

- float amount

  A float value between 0..1 to indicate the amount to which the expression should be shown on the face, 0 meaning 'not at all' and 1 meaning 'maximum, highly exaggerated'
- float overshoot

  Fraction of overshoot of the attack peak, relative to amount (which defines the level of the sustain phase)

Additional Inherited Members

5.4.1 Detailed Description

Compound behavior to specify the timing and alignment of several (partial) face expressions as one unit.

Definition at line 24 of file BMLFace.cs.

5.4.2 Constructor & Destructor Documentation

5.4.2.1 BMLFace()

```
BMLRealizer.BMLFace.BMLFace ( )
```

constructor

Definition at line 39 of file BMLFace.cs.

5.4.3 Member Function Documentation

5.4.3.1 Parse()

```
override void BMLRealizer.BMLFace.Parse (
            XmlReader reader )  [virtual]
```

parsing the xml atribute: id, amount, overshoot synx attribute: start, attackPeak, relax, end

Parameters

reader	

XMLReader

Reimplemented from BMLRealizer.BMLBehavior.

Reimplemented in BMLRealizer.BMLFaceLexeme.

Definition at line 51 of file BMLFace.cs.

5.4.4 Member Data Documentation

5.4.4.1 amount

```
float BMLRealizer.BMLFace.amount
```

A float value between 0..1 to indicate the amount to which the expression should be shown on the face, 0 meaning 'not at all' and 1 meaning 'maximum, highly exaggerated'

Definition at line 29 of file BMLFace.cs.

5.4.4.2 overshoot

```
float BMLRealizer.BMLFace.overshoot
```

Fraction of overshoot of the attack peak, relative to amount (which defines the level of the sustain phase)

Definition at line 34 of file BMLFace.cs.

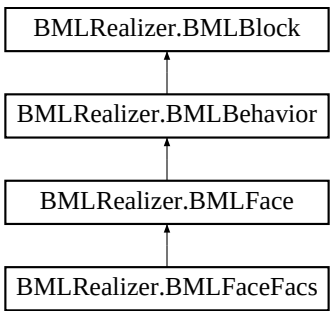
The documentation for this class was generated from the following file:

- C:/Users/Chris021/OneDrive - Universiteit Utrecht/project/rage/BML-Realizer/RageBMLRealizer/BML↩ Realizer/BMLFace.cs

5.5 BMLRealizer.BMLFaceFacs Class Reference

This behavior provides control of the face through single Action Units from the Facial Action Coding Scheme. It is an Core Extension, that is, not every BML Compliant Realizer has to implement this behavior, but if a Realizer offers FACS based face control, they should adhere to the specification of this <faceFacs> behavior

Inheritance diagram for BMLRealizer.BMLFaceFacs:



Public Types

- enum Side { **LEFT**, **RIGHT**, **BOTH** }

Public Member Functions

- BMLFaceFacs ()

  Constructor

Public Attributes

- int au

  The number of the FACS Action Unit to be displayed
- Side side

  Which side of the face to display the action unit on. Possible values: [LEFT,RIGHT,BOTH] Note that for some Action Units, BOTH is the only possible value

Additional Inherited Members

5.5.1 Detailed Description

This behavior provides control of the face through single Action Units from the Facial Action Coding Scheme. It is an Core Extension, that is, not every BML Compliant Realizer has to implement this behavior, but if a Realizer offers FACS based face control, they should adhere to the specification of this <faceFacs> behavior

Definition at line 22 of file BMLFaceFacs.cs.

5.5.2 Member Enumeration Documentation

5.5.2.1 Side

```
enum BMLRealizer.BMLFaceFacs.Side  [strong]
```

Definition at line 37 of file BMLFaceFacs.cs.

5.5.3 Constructor & Destructor Documentation

5.5.3.1 BMLFaceFacs()

```
BMLRealizer.BMLFaceFacs.BMLFaceFacs ( )
```

Constructor

Definition at line 47 of file BMLFaceFacs.cs.

5.5.4 Member Data Documentation

5.5.4.1 au

```
int BMLRealizer.BMLFaceFacs.au
```

The number of the FACS Action Unit to be displayed

Definition at line 27 of file BMLFaceFacs.cs.

5.5.4.2 side

```
Side BMLRealizer.BMLFaceFacs.side
```

Which side of the face to display the action unit on. Possible values: [LEFT,RIGHT,BOTH] Note that for some Action Units, BOTH is the only possible value

Definition at line 32 of file BMLFaceFacs.cs.

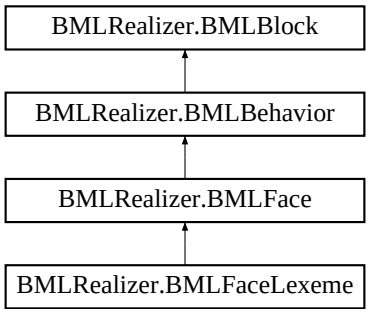
The documentation for this class was generated from the following file:

- C:/Users/Chris021/OneDrive - Universiteit Utrecht/project/rage/BML-Realizer/RageBMLRealizer/BML↩ Realizer/BMLFaceFacs.cs

5.6 BMLRealizer.BMLFaceLexeme Class Reference

Show a (partial) face expression from a predefined lexicon.

Inheritance diagram for BMLRealizer.BMLFaceLexeme:



Public Types

- enum Lexeme {
  NONE, **OBLIQUE_BROWS**, **RAISE_BROWS**, **RAISE_LEFT_BROW**,
  RAISE_RIGHT_BROW, **LOWER_BROWS**, **LOWER_LEFT_BROW**, **LOWER_RIGHT_BROW**,
  LOWER_MOUTH_CORNERS, **LOWER_LEFT_MOUTH_CORNER**, **LOWER_RIGHT_MOUTH_CORNER**,
  RAISE_MOUTH_CORNERS,
  RAISE_RIGHT_MOUTH_CORNER, **RAISE_LEFT_MOUTH_CORNER**, **OPEN_MOUTH**, **OPEN_LIPS**,
  WIDEN_EYES, **CLOSE_EYES** }

Public Member Functions

- BMLFaceLexeme ()
  constructor
- override void Parse (XmlReader reader)
  parsing the xml atribute: lexeme

Public Attributes

- Lexeme lexeme

Additional Inherited Members

5.6.1 Detailed Description

Show a (partial) face expression from a predefined lexicon.

Definition at line 24 of file BMLFaceLexeme.cs.

5.6.2 Member Enumeration Documentation

5.6.2.1 Lexeme

```
enum BMLRealizer.BMLFaceLexeme.Lexeme  [strong]
```

Definition at line 35 of file BMLFaceLexeme.cs.

5.6.3 Constructor & Destructor Documentation

5.6.3.1 BMLFaceLexeme()

```
BMLRealizer.BMLFaceLexeme.BMLFaceLexeme ( )
```

constructor

Definition at line 60 of file BMLFaceLexeme.cs.

5.6.4 Member Function Documentation

5.6.4.1 Parse()

```
override void BMLRealizer.BMLFaceLexeme.Parse (
            XmlReader reader )  [virtual]
```

parsing the xml atribute: lexeme

Parameters

reader	

Reimplemented from BMLRealizer.BMLFace.

Definition at line 70 of file BMLFaceLexeme.cs.

5.6.5 Member Data Documentation

5.6.5.1 lexeme

```
Lexeme BMLRealizer.BMLFaceLexeme.lexeme
```

Definition at line 30 of file BMLFaceLexeme.cs.

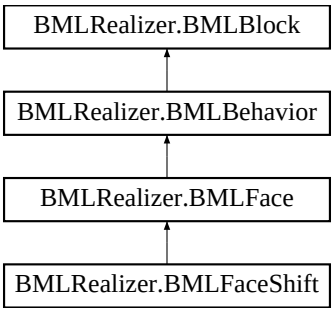
The documentation for this class was generated from the following file:

- C:/Users/Chris021/OneDrive - Universiteit Utrecht/project/rage/BML-Realizer/RageBMLRealizer/BML↩ Realizer/BMLFaceLexeme.cs

5.7 BMLRealizer.BMLFaceShift Class Reference

Compound behavior to specify the timing and alignment of several (partial) face expressions as one unit, where the specified compound face expression becomes the new BASE state of the ECAs face.

Inheritance diagram for BMLRealizer.BMLFaceShift:



Additional Inherited Members

5.7.1 Detailed Description

Compound behavior to specify the timing and alignment of several (partial) face expressions as one unit, where the specified compound face expression becomes the new BASE state of the ECAs face.

Definition at line 22 of file BMLFaceShift.cs.

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

- C:/Users/Chris021/OneDrive - Universiteit Utrecht/project/rage/BML-Realizer/RageBMLRealizer/BML↩ Realizer/BMLFaceShift.cs

5.8 BMLRealizer.BMLFeedback Class Reference

5.8.1 Detailed Description

Definition at line 19 of file BMLFeedback.cs.

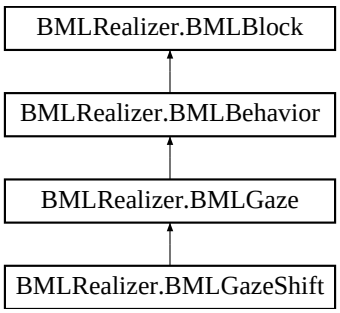
The documentation for this class was generated from the following file:

- C:/Users/Chris021/OneDrive - Universiteit Utrecht/project/rage/BML-Realizer/RageBMLRealizer/BML↩ Realizer/BMLFeedback.cs

5.9 BMLRealizer.BMLGaze Class Reference

Temporarily directs the gaze of the character towards a target. This behavior causes the character to temporarily direct its gaze to the requested target. The influence parameter is read as follows: EYE means 'use only the eyes'; HEAD means 'use only head and eyes to change the gaze direction', etcetera.

Inheritance diagram for BMLRealizer.BMLGaze:



Public Types

- enum Influence {
  NONE, **EYES**, **HEAD**, **SHOULDER**,
  WAIST, **WHOLE** }

  Determines what parts of the body to move to effect the gaze direction.
- enum Direction {
  RIGHT, **LEFT**, **UP**, **DOWN**,
  UPRIGHT, **UPLEFT**, **DOWNLEFT**, **DOWNRIGHT** }

  Direction of the offsetDirection angle.

Public Member Functions

- BMLGaze ()

  constructor
- override void Parse (XmlReader reader)

  parsing the xml atribute: target, influence, offsetAngle, offsetDirection sync point: start, ready, relax, end

Public Attributes

- string target

  A reference towards a target instance that represents the target direction of the gaze.
- Influence influence

  Determines what parts of the body to move to effect the gaze direction.
- float offsetAngle

  Adds an angle degrees offset to gaze direction relative to the target in the direction specified in the offsetDirection
- Direction offsetDirection

  Direction of the offsetDirection angle

Additional Inherited Members

5.9.1 Detailed Description

Temporarily directs the gaze of the character towards a target. This behavior causes the character to temporarily direct its gaze to the requested target. The influence parameter is read as follows: EYE means 'use only the eyes'; HEAD means 'use only head and eyes to change the gaze direction', etcetera.

Definition at line 26 of file BMLGaze.cs.

5.9.2 Member Enumeration Documentation

5.9.2.1 Direction

```
enum BMLRealizer.BMLGaze.Direction  [strong]
```

Direction of the offsetDirection angle.

Definition at line 64 of file BMLGaze.cs.

5.9.2.2 Influence

```
enum BMLRealizer.BMLGaze.Influence  [strong]
```

Determines what parts of the body to move to effect the gaze direction.

Definition at line 51 of file BMLGaze.cs.

5.9.3 Constructor & Destructor Documentation

5.9.3.1 BMLGaze()

```
BMLRealizer.BMLGaze.BMLGaze ( )
```

constructor

Definition at line 79 of file BMLGaze.cs.

5.9.4 Member Function Documentation

5.9.4.1 Parse()

```
override void BMLRealizer.BMLGaze.Parse (
            XmlReader reader )  [virtual]
```

parsing the xml atribute: target, influence, offsetAngle, offsetDirection sync point: start, ready, relax, end

Parameters

reader	

Reimplemented from BMLRealizer.BMLBehavior.

Reimplemented in BMLRealizer.BMLGazeShift.

Definition at line 91 of file BMLGaze.cs.

5.9.5 Member Data Documentation

5.9.5.1 influence

```
Influence BMLRealizer.BMLGaze.influence
```

Determines what parts of the body to move to effect the gaze direction.

Definition at line 36 of file BMLGaze.cs.

5.9.5.2 offsetAngle

```
float BMLRealizer.BMLGaze.offsetAngle
```

Adds an angle degrees offset to gaze direction relative to the target in the direction specified in the offsetDirection

Definition at line 41 of file BMLGaze.cs.

5.9.5.3 offsetDirection

```
Direction BMLRealizer.BMLGaze.offsetDirection
```

Direction of the offsetDirection angle

Definition at line 46 of file BMLGaze.cs.

5.9.5.4 target

```
string BMLRealizer.BMLGaze.target
```

A reference towards a target instance that represents the target direction of the gaze.

Definition at line 31 of file BMLGaze.cs.

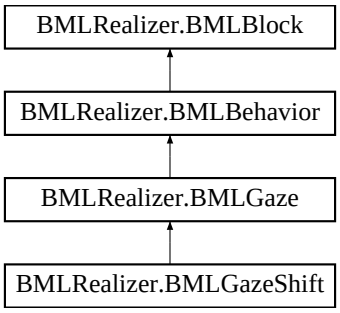
The documentation for this class was generated from the following file:

- C:/Users/Chris021/OneDrive - Universiteit Utrecht/project/rage/BML-Realizer/RageBMLRealizer/BML↩ Realizer/BMLGaze.cs

5.10 BMLRealizer.BMLGazeShift Class Reference

Permanently change the gaze direction of the character towards a certain target. This behavior causes the character to direct its gaze to the requested target. This changes the default state of the ECA: after completing this behavior, the new target is the default gaze direction of the ECA. The influence parameter is read as follows: EYE means 'use only the eyes'; HEAD means 'use only head and eyes to change the gaze direction', etcetera.

Inheritance diagram for BMLRealizer.BMLGazeShift:



Public Member Functions

- BMLGazeShift ()
  constructor sync attribute: start, end
- override void Parse (XmlReader reader)
  parsing the xml attribute: sync point: start, end

Additional Inherited Members

5.10.1 Detailed Description

Permanently change the gaze direction of the character towards a certain target. This behavior causes the character to direct its gaze to the requested target. This changes the default state of the ECA: after completing this behavior, the new target is the default gaze direction of the ECA. The influence parameter is read as follows: EYE means 'use only the eyes'; HEAD means 'use only head and eyes to change the gaze direction', etcetera.

Definition at line 25 of file BMLGazeShift.cs.

5.10.2 Constructor & Destructor Documentation

5.10.2.1 BMLGazeShift()

```
BMLRealizer.BMLGazeShift.BMLGazeShift ( )
```

constructor sync attribute: start, end

Definition at line 31 of file BMLGazeShift.cs.

5.10.3 Member Function Documentation

5.10.3.1 Parse()

```
override void BMLRealizer.BMLGazeShift.Parse (
            XmlReader reader )  [virtual]
```

parsing the xml attribute: sync point: start, end

Parameters

reader	

XMLReader

Reimplemented from BMLRealizer.BMLGaze.

Definition at line 42 of file BMLGazeShift.cs.

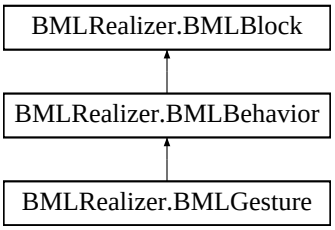
The documentation for this class was generated from the following file:

- C:/Users/Chris021/OneDrive - Universiteit Utrecht/project/rage/BML-Realizer/RageBMLRealizer/BML↩ Realizer/BMLGazeShift.cs

5.11 BMLRealizer.BMLGesture Class Reference

Currently, BML offers two types of gesture behaviors. The first provides a set of gestures recalled by name from a gesticon; the second provides simple pointing gestures. Coordinated movement with arms and hands, recalled from a gesticon by requesting the corresponding lexeme

Inheritance diagram for BMLRealizer.BMLGesture:



Public Types

- enum Mode { **NONE**, **LEFT_HAND**, **RIGHT_HAND**, **BOTH_HANDS** }

  What hand/arm is being used
- enum Lexeme { **BEAT** }

  Refers to an animation or a controller to realize this particular gesture.

Public Member Functions

- BMLGesture ()

  constructor
- override void Parse (XmlReader reader)

  parsing the xml atribute: mode, lexeme sync point: start, ready, strokeStart, stroke, strokeEnd, relax, end

Public Attributes

- Mode mode

  What hand/arm is being used
- Lexeme lexeme

  Refers to an animation or a controller to realize this particular gesture.

Additional Inherited Members

5.11.1 Detailed Description

Currently, BML offers two types of gesture behaviors. The first provides a set of gestures recalled by name from a gesticon; the second provides simple pointing gestures. Coordinated movement with arms and hands, recalled from a gesticon by requesting the corresponding lexeme

Definition at line 25 of file BMLGesture.cs.

5.11.2 Member Enumeration Documentation

5.11.2.1 Lexeme

```
enum BMLRealizer.BMLGesture.Lexeme  [strong]
```

Refers to an animation or a controller to realize this particular gesture.

Definition at line 51 of file BMLGesture.cs.

5.11.2.2 Mode

```
enum BMLRealizer.BMLGesture.Mode  [strong]
```

What hand/arm is being used

Definition at line 40 of file BMLGesture.cs.

5.11.3 Constructor & Destructor Documentation

5.11.3.1 BMLGesture()

```
BMLRealizer.BMLGesture.BMLGesture ( )
```

constructor

Definition at line 59 of file BMLGesture.cs.

5.11.4 Member Function Documentation

5.11.4.1 Parse()

```
override void BMLRealizer.BMLGesture.Parse (
            XmlReader reader )  [virtual]
```

parsing the xml atribute: mode, lexeme sync point: start, ready, strokeStart, stroke, strokeEnd, relax, end

Parameters

reader	

Reimplemented from BMLRealizer.BMLBehavior.

Definition at line 70 of file BMLGesture.cs.

5.11.5 Member Data Documentation

5.11.5.1 lexeme

`Lexeme BMLRealizer.BMLGesture.lexeme`

Refers to an animation or a controller to realize this particular gesture.

Definition at line 35 of file BMLGesture.cs.

5.11.5.2 mode

`Mode BMLRealizer.BMLGesture.mode`

What hand/arm is being used

Definition at line 30 of file BMLGesture.cs.

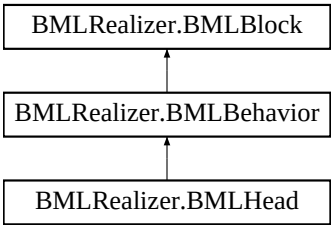
The documentation for this class was generated from the following file:

- C:/Users/Chris021/OneDrive - Universiteit Utrecht/project/rage/BML-Realizer/RageBMLRealizer/BML↩ Realizer/BMLGesture.cs

5.12 BMLRealizer.BMLHead Class Reference

Movement of the head, recalled from a gesticon by requesting the corresponding lexeme. Movement of the head, recalled from a gesticon by requesting the corresponding lexeme. The stroke phase of the head motion (from strokeStart till strokeEnd is the "meaningful" part of the head motion. The stroke sync point is the "peak" moment of the motion. If repetition > 1, the meaning of the stroke sync point becomes undefined

Inheritance diagram for BMLRealizer.BMLHead:



Public Types

- enum Lexeme { **NONE**, **NOD**, **SHAKE** }

  Refers to an animation or a controller to realize this particular head behavior. Minimum set offered by all realizers: [NOD, SHAKE]

Public Member Functions

- BMLHead ()

  constructor
- override void Parse (XmlReader reader)

  parsing the xml atribute: id, amount, overshoot sync attribute: start, ready, strokeStart, stroke, strokeEnd, relax, end

Public Attributes

- Lexeme lexeme

  Refers to an animation or a controller to realize this particular head behavior. Minimum set offered by all realizers: [NOD, SHAKE]
- int repetition

  Number of times the basic head motion is repeated.
- float amount

  How intense is the head nod? 0 means immeasurable small; 0.5 means "moderate"; 1 means maximally large

Additional Inherited Members

5.12.1 Detailed Description

Movement of the head, recalled from a gesticon by requesting the corresponding lexeme. Movement of the head, recalled from a gesticon by requesting the corresponding lexeme. The stroke phase of the head motion (from strokeStart till strokeEnd is the "meaningful" part of the head motion. The stroke sync point is the "peak" moment of the motion. If repetition $>$ 1, the meaning of the stroke sync point becomes undefined

Definition at line 25 of file BMLHead.cs.

5.12.2 Member Enumeration Documentation

5.12.2.1 Lexeme

```
enum BMLRealizer.BMLHead.Lexeme  [strong]
```

Refers to an animation or a controller to realize this particular head behavior. Minimum set offered by all realizers: [NOD, SHAKE]

Definition at line 45 of file BMLHead.cs.

5.12.3 Constructor & Destructor Documentation

5.12.3.1 BMLHead()

```
BMLRealizer.BMLHead.BMLHead ( )
```

constructor

Definition at line 55 of file BMLHead.cs.

5.12.4 Member Function Documentation

5.12.4.1 Parse()

```
override void BMLRealizer.BMLHead.Parse (
            XmlReader reader )  [virtual]
```

parsing the xml atribute: id, amount, overshoot sync attribute: start, ready, strokeStart, stroke, strokeEnd, relax, end

Parameters

reader	

XMLReader

Reimplemented from BMLRealizer.BMLBehavior.

Definition at line 65 of file BMLHead.cs.

5.12.5 Member Data Documentation

5.12.5.1 amount

```
float BMLRealizer.BMLHead.amount
```

How intense is the head nod? 0 means immeasurable small; 0.5 means "moderate"; 1 means maximally large

Definition at line 40 of file BMLHead.cs.

5.12.5.2 lexeme

```
Lexeme BMLRealizer.BMLHead.lexeme
```

Refers to an animation or a controller to realize this particular head behavior. Minimum set offered by all realizers: [NOD, SHAKE]

Definition at line 30 of file BMLHead.cs.

5.12.5.3 repetition

```
int BMLRealizer.BMLHead.repetition
```

Number of times the basic head motion is repeated.

Definition at line 35 of file BMLHead.cs.

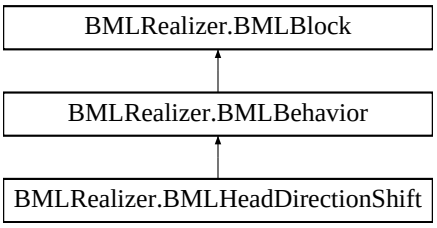
The documentation for this class was generated from the following file:

- C:/Users/Chris021/OneDrive - Universiteit Utrecht/project/rage/BML-Realizer/RageBMLRealizer/BML↩ Realizer/BMLHead.cs

5.13 BMLRealizer.BMLHeadDirectionShift Class Reference

Orient the head towards a target referenced by the target attribute. Permanently orient the head in a certain direction.

Inheritance diagram for BMLRealizer.BMLHeadDirectionShift:



Public Member Functions

- BMLHeadDirectionShift ()
  constructor
- override void Parse (XmlReader reader)
  parsing the xml atribute: id, amount, overshoot sync attribute: start, end

Public Attributes

- string target
  target towards which the head is oriented

Additional Inherited Members

5.13.1 Detailed Description

Orient the head towards a target referenced by the target attribute. Permanently orient the head in a certain direction.

Definition at line 25 of file BMLHeadDirectionShift.cs.

5.13.2 Constructor & Destructor Documentation

5.13.2.1 BMLHeadDirectionShift()

```
BMLRealizer.BMLHeadDirectionShift.BMLHeadDirectionShift ( )
```

constructor

Definition at line 35 of file BMLHeadDirectionShift.cs.

5.13.3 Member Function Documentation

5.13.3.1 Parse()

```
override void BMLRealizer.BMLHeadDirectionShift.Parse (
            XmlReader reader )  [virtual]
```

parsing the xml atribute: id, amount, overshoot sync attribute: start, end

Parameters

reader	

XMLReader

Reimplemented from BMLRealizer.BMLBehavior.

Definition at line 46 of file BMLHeadDirectionShift.cs.

5.13.4 Member Data Documentation

5.13.4.1 target

```
string BMLRealizer.BMLHeadDirectionShift.target
```

target towards which the head is oriented

Definition at line 30 of file BMLHeadDirectionShift.cs.

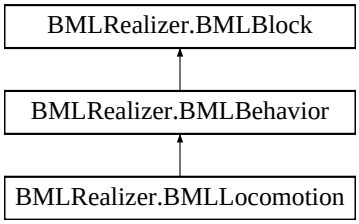
The documentation for this class was generated from the following file:

- C:/Users/Chris021/OneDrive - Universiteit Utrecht/project/rage/BML-Realizer/RageBMLRealizer/BML↩ Realizer/BMLHeadDirectionShift.cs

5.14 BMLRealizer.BMLLocomotion Class Reference

Move the body of the character from one location to another. This behavior causes the character to move to the requested target in the manner described.

Inheritance diagram for BMLRealizer.BMLLocomotion:



Public Member Functions

- BMLLocomotion ()
  constructor
- override void Parse (XmlReader reader)
  parsing xml atribute: id, target, manner sync point: start, end

Public Attributes

- string target
  A reference towards a target instance that represents the end location of the locomotive behavior.
- string manner
  The general manner of locomotion [WALK, RUN, STRAFE ...] (WALK is the only mandatory element in the set)

Additional Inherited Members

5.14.1 Detailed Description

Move the body of the character from one location to another. This behavior causes the character to move to the requested target in the manner described.

Definition at line 25 of file BMLLocomotion.cs.

5.14.2 Constructor & Destructor Documentation

5.14.2.1 BMLLocomotion()

```
BMLRealizer.BMLLocomotion.BMLLocomotion ( )
```

constructor

Definition at line 40 of file BMLLocomotion.cs.

5.14.3 Member Function Documentation

5.14.3.1 Parse()

```
override void BMLRealizer.BMLLocomotion.Parse (
            XmlReader reader )  [virtual]
```

parsing xml atribute: id, target, manner sync point: start, end

Parameters

reader	

Reimplemented from BMLRealizer.BMLBehavior.

Definition at line 51 of file BMLLocomotion.cs.

5.14.4 Member Data Documentation

5.14.4.1 manner

```
string BMLRealizer.BMLLocomotion.manner
```

The general manner of locomotion [WALK, RUN, STRAFE ...] (WALK is the only mandatory element in the set)

Definition at line 35 of file BMLLocomotion.cs.

5.14.4.2 target

```
string BMLRealizer.BMLLocomotion.target
```

A reference towards a target instance that represents the end location of the locomotive behavior.

Definition at line 30 of file BMLLocomotion.cs.

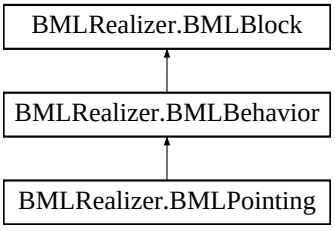
The documentation for this class was generated from the following file:

- C:/Users/Chris021/OneDrive - Universiteit Utrecht/project/rage/BML-Realizer/RageBMLRealizer/BML↩ Realizer/BMLLocomotion.cs

5.15 BMLRealizer.BMLPointing Class Reference

Deictic gesture towards the target specified by the target attribute

Inheritance diagram for BMLRealizer.BMLPointing:



Public Types

- enum Mode { **NONE**, **LEFT_HAND**, **RIGHT_HAND**, **BOTH_HANDS** }
  What hand/arm is being used

Public Member Functions

- BMLPointing ()
  constructor
- override void Parse (XmlReader reader)
  parsing the xml atribute: id, target, mode sync point: start, ready, strokeStart, stroke, strokeEnd, relax, end

Public Attributes

- Mode mode
  What hand/arm is being used
- string target
  The gesture is directed towards this target

Additional Inherited Members

5.15.1 Detailed Description

Deictic gesture towards the target specified by the target attribute

Definition at line 24 of file BMLPointing.cs.

5.15.2 Member Enumeration Documentation

5.15.2.1 Mode

```
enum BMLRealizer.BMLPointing.Mode  [strong]
```

What hand/arm is being used

Definition at line 39 of file BMLPointing.cs.

5.15.3 Constructor & Destructor Documentation

5.15.3.1 BMLPointing()

```
BMLRealizer.BMLPointing.BMLPointing ( )
```

constructor

Definition at line 50 of file BMLPointing.cs.

5.15.4 Member Function Documentation

5.15.4.1 Parse()

```
override void BMLRealizer.BMLPointing.Parse (
            XmlReader reader )  [virtual]
```

parsing the xml atribute: id, target, mode sync point: start, ready, strokeStart, stroke, strokeEnd, relax, end

Parameters

reader	

XMLReader

Reimplemented from BMLRealizer.BMLBehavior.

Definition at line 61 of file BMLPointing.cs.

5.15.5 Member Data Documentation

5.15.5.1 mode

```
Mode BMLRealizer.BMLPointing.mode
```

What hand/arm is being used

Definition at line 29 of file BMLPointing.cs.

5.15.5.2 target

```
string BMLRealizer.BMLPointing.target
```

The gesture is directed towards this target

Definition at line 34 of file BMLPointing.cs.

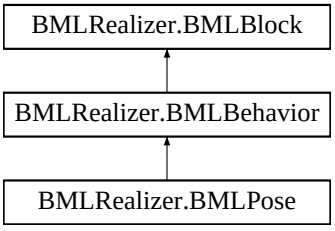
The documentation for this class was generated from the following file:

- C:/Users/Chris021/OneDrive - Universiteit Utrecht/project/rage/BML-Realizer/RageBMLRealizer/BML↩ Realizer/BMLPointing.cs

5.16 BMLRealizer.BMLPose Class Reference

Child element of <posture> and <postureShift> behaviors, defines additions to the global body posture of the ECA. Child element of <posture> and <postureShift> behaviors, defines additions that modify the global body posture of the ECA. For each value of the part attribute, only one <pose> child is expected to be present. A BML Realizer may define any number of lexemes beyond the ones specified above.

Inheritance diagram for BMLRealizer.BMLPose:



Public Types

- enum Part {
  NONE, **ARMS**, **LEFT_ARM**, **RIGHT_ARM**,
  LEGS, **LEFT_LEG**, **RIGHT_LEG**, **HEAD**,
  WHOLEBODY }

  What part of the body is affected? Possible values are [ARMS, LEFT_ARM, RIGHT_ARM, LEGS, LEFT_LEG, RIGHT_LEG, HEAD, WHOLEBODY]
- enum Lexeme {
  NONE, **ARMS_AKIMBO**, **ARMS_CROSSED**, **ARMS_NEUTRAL**,
  ARMS_OPEN, **LEGS_CROSSED**, **LEGS_NEUTRAL**, **LEGS_OPEN**,
  LEANING_FORWARD, **LEANING_BACKWARD** }

  What configuration is set to the given part? Some possible values are [ARMS_AKIMBO, ARMS_CROSSED, ARMS_NEUTRAL, ARMS_OPEN, LEGS_CROSSED, LEGS_NEUTRAL, LEGS_OPEN, LEANING_FORWARD, LEANING_BACKWARD, ...]

Public Member Functions

- BMLPose ()

  constructor
- override void Parse (XmlReader reader)

  parsing xml atribute: part, lexeme

Public Attributes

- Part part

  What part of the body is affected? Possible values are [ARMS, LEFT_ARM, RIGHT_ARM, LEGS, LEFT_LEG, RIGHT_LEG, HEAD, WHOLEBODY]
- Lexeme lexeme

  What configuration is set to the given part? Some possible values are [ARMS_AKIMBO, ARMS_CROSSED, ARMS_NEUTRAL, ARMS_OPEN, LEGS_CROSSED, LEGS_NEUTRAL, LEGS_OPEN, LEANING_FORWARD, LEANING_BACKWARD, ...]

Additional Inherited Members

5.16.1 Detailed Description

Child element of <posture> and <postureShift> behaviors, defines additions to the global body posture of the ECA. Child element of <posture> and <postureShift> behaviors, defines additions that modify the global body posture of the ECA. For each value of the part attribute, only one <pose> child is expected to be present. A BML Realizer may define any number of lexemes beyond the ones specified above.

Definition at line 25 of file BMLPose.cs.

5.16.2 Member Enumeration Documentation

5.16.2.1 Lexeme

`enum BMLRealizer.BMLPose.Lexeme [strong]`

What configuration is set to the given part? Some possible values are [ARMS_AKIMBO, ARMS_CROSSED, ARMS_NEUTRAL, ARMS_OPEN, LEGS_CROSSED, LEGS_NEUTRAL, LEGS_OPEN, LEANING_FORWARD, LEANING_BACKWARD, ...]

Definition at line 56 of file BMLPose.cs.

5.16.2.2 Part

```
enum BMLRealizer.BMLPose.Part  [strong]
```

What part of the body is affected? Possible values are [ARMS, LEFT_ARM, RIGHT_ARM, LEGS, LEFT_LEG, RIGHT_LEG, HEAD, WHOLEBODY]

Definition at line 40 of file BMLPose.cs.

5.16.3 Constructor & Destructor Documentation

5.16.3.1 BMLPose()

```
BMLRealizer.BMLPose.BMLPose ( )
```

constructor

Definition at line 73 of file BMLPose.cs.

5.16.4 Member Function Documentation

5.16.4.1 Parse()

```
override void BMLRealizer.BMLPose.Parse (
            XmlReader reader )  [virtual]
```

parsing xml atribute: part, lexeme

Parameters

reader	

Reimplemented from BMLRealizer.BMLBehavior.

Definition at line 83 of file BMLPose.cs.

5.16.5 Member Data Documentation

5.16.5.1 lexeme

```
Lexeme BMLRealizer.BMLPose.lexeme
```

What configuration is set to the given part? Some possible values are [ARMS_AKIMBO, ARMS_CROSSED, ARMS_NEUTRAL, ARMS_OPEN, LEGS_CROSSED, LEGS_NEUTRAL, LEGS_OPEN, LEANING_FORWARD, LEANING_BACKWARD, ...]

Definition at line 35 of file BMLPose.cs.

5.16.5.2 part

```
Part BMLRealizer.BMLPose.part
```

What part of the body is affected? Possible values are [ARMS, LEFT_ARM, RIGHT_ARM, LEGS, LEFT_LEG, RIGHT_LEG, HEAD, WHOLEBODY]

Definition at line 30 of file BMLPose.cs.

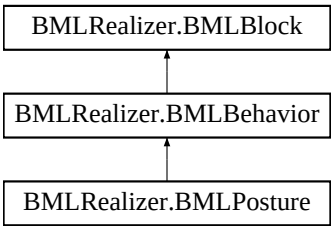
The documentation for this class was generated from the following file:

- C:/Users/Chris021/OneDrive - Universiteit Utrecht/project/rage/BML-Realizer/RageBMLRealizer/BML↩ Realizer/BMLPose.cs

5.17 BMLRealizer.BMLPosture Class Reference

Temporarily change the posture of the ECA. Temporarily change the posture of the ECA. After the <posture> behavior has ended, return to the BASE posture.

Inheritance diagram for BMLRealizer.BMLPosture:



Public Member Functions

- BMLPosture ()

  constructor
- override void Parse (XmlReader reader)

  parsing xml atribute: id sync point: start, ready, relax, end

Additional Inherited Members

5.17.1 Detailed Description

Temporarily change the posture of the ECA. Temporarily change the posture of the ECA. After the <posture> behavior has ended, return to the BASE posture.

Definition at line 25 of file BMLPosture.cs.

5.17.2 Constructor & Destructor Documentation

5.17.2.1 BMLPosture()

```
BMLRealizer.BMLPosture.BMLPosture ( )
```

constructor

Definition at line 30 of file BMLPosture.cs.

5.17.3 Member Function Documentation

5.17.3.1 Parse()

```
override void BMLRealizer.BMLPosture.Parse (
            XmlReader reader )  [virtual]
```

parsing xml atribute: id sync point: start, ready, relax, end

Parameters

reader	

XmlReader

Reimplemented from BMLRealizer.BMLBehavior.

Definition at line 41 of file BMLPosture.cs.

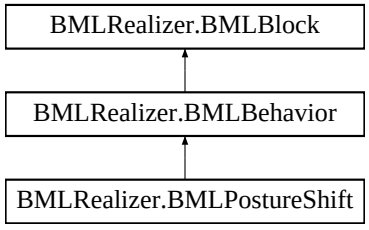
The documentation for this class was generated from the following file:

- C:/Users/Chris021/OneDrive - Universiteit Utrecht/project/rage/BML-Realizer/RageBMLRealizer/BML↩ Realizer/BMLPosture.cs

5.18 BMLRealizer.BMLPostureShift Class Reference

Permanently change the BASE posture of the ECA.

Inheritance diagram for BMLRealizer.BMLPostureShift:



Public Member Functions

- BMLPostureShift ()
  constructor
- override void Parse (XmlReader reader)
  parsing xml atribute: id sync point: start, end

Additional Inherited Members

5.18.1 Detailed Description

Permanently change the BASE posture of the ECA.

Definition at line 24 of file BMLPostureShift.cs.

5.18.2 Constructor & Destructor Documentation

5.18.2.1 BMLPostureShift()

```
BMLRealizer.BMLPostureShift.BMLPostureShift ( )
```

constructor

Definition at line 29 of file BMLPostureShift.cs.

5.18.3 Member Function Documentation

5.18.3.1 Parse()

```
override void BMLRealizer.BMLPostureShift.Parse (
            XmlReader reader )  [virtual]
```

parsing xml atribute: id sync point: start, end

Parameters

reader	

XmlReader

Reimplemented from BMLRealizer.BMLBehavior.

Definition at line 40 of file BMLPostureShift.cs.

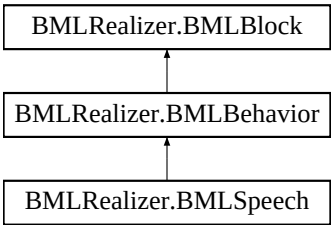
The documentation for this class was generated from the following file:

- C:/Users/Chris021/OneDrive - Universiteit Utrecht/project/rage/BML-Realizer/RageBMLRealizer/BML↩ Realizer/BMLPostureShift.cs

5.19 BMLRealizer.BMLSpeech Class Reference

Utterance to be spoken by a character. Realization of the <speech> element generates both speech audio (or text) and speech movement, for example using a speech synthesizer and viseme morphing. The<speech> element requires a sub-element.This sub-element is a<text> element that contains the text to be spoken, with optionally embedded<sync> elements for alignment with other behaviors.

Inheritance diagram for BMLRealizer.BMLSpeech:



Public Member Functions

- BMLSpeech ()
  constructor
- override void Parse (XmlReader reader)
  parsing the xml child node: text sync point: start, end

Public Attributes

- string text
  the text that need to be spoken

Additional Inherited Members

5.19.1 Detailed Description

Utterance to be spoken by a character. Realization of the <speech> element generates both speech audio (or text) and speech movement, for example using a speech synthesizer and viseme morphing. The<speech> element requires a sub-element.This sub-element is a<text> element that contains the text to be spoken, with optionally embedded<sync> elements for alignment with other behaviors.

Definition at line 29 of file BMLSpeech.cs.

5.19.2 Constructor & Destructor Documentation

5.19.2.1 BMLSpeech()

```
BMLRealizer.BMLSpeech.BMLSpeech ( )
```

constructor

Definition at line 39 of file BMLSpeech.cs.

5.19.3 Member Function Documentation

5.19.3.1 Parse()

```
override void BMLRealizer.BMLSpeech.Parse (
            XmlReader reader )  [virtual]
```

parsing the xml child node: text sync point: start, end

Parameters

reader	

Reimplemented from BMLRealizer.BMLBehavior.

Definition at line 50 of file BMLSpeech.cs.

5.19.4 Member Data Documentation

5.19.4.1 text

```
string BMLRealizer.BMLSpeech.text
```

the text that need to be spoken

Definition at line 34 of file BMLSpeech.cs.

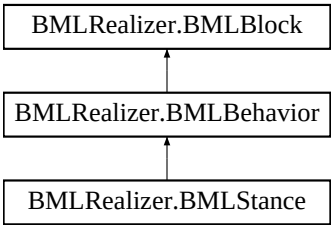
The documentation for this class was generated from the following file:

- C:/Users/Chris021/OneDrive - Universiteit Utrecht/project/rage/BML-Realizer/RageBMLRealizer/BML↩ Realizer/BMLSpeech.cs

5.20 BMLRealizer.BMLStance Class Reference

Child element of <posture> and <postureShift> behaviors, defines global body posture of the ECA. Child element of <posture> and <postureShift> behaviors, defines global body posture of the ECA. This global posture may then be modified by one or more <pose> siblings.

Inheritance diagram for BMLRealizer.BMLStance:



Public Types

- enum Type { **SITTING**, **CROUCHING**, **STANDING**, **LYING** }
  Global body posture. Possible values are [SITTING, CROUCHING, STANDING, LYING]

Public Member Functions

- BMLStance ()
  constructor
- override void Parse (XmlReader reader)
  parsing the xml atribute: id

Public Attributes

- Type type
  Global body posture. Possible values are [SITTING, CROUCHING, STANDING, LYING]

Additional Inherited Members

5.20.1 Detailed Description

Child element of <posture> and <postureShift> behaviors, defines global body posture of the ECA. Child element of <posture> and <postureShift> behaviors, defines global body posture of the ECA. This global posture may then be modified by one or more <pose> siblings.

Definition at line 25 of file BMLStance.cs.

5.20.2 Member Enumeration Documentation

5.20.2.1 Type

```
enum BMLRealizer.BMLStance.Type  [strong]
```

Global body posture. Possible values are [SITTING, CROUCHING, STANDING, LYING]

Definition at line 35 of file BMLStance.cs.

5.20.3 Constructor & Destructor Documentation

5.20.3.1 BMLStance()

```
BMLRealizer.BMLStance.BMLStance ( )
```

constructor

Definition at line 46 of file BMLStance.cs.

5.20.4 Member Function Documentation

5.20.4.1 Parse()

```
override void BMLRealizer.BMLStance.Parse (
            XmlReader reader )  [virtual]
```

parsing the xml atribute: id

Parameters

reader	

Reimplemented from BMLRealizer.BMLBehavior.

Definition at line 51 of file BMLStance.cs.

5.20.5 Member Data Documentation

5.20.5.1 type

```
Type BMLRealizer.BMLStance.type
```

Global body posture. Possible values are [SITTING, CROUCHING, STANDING, LYING]

Definition at line 30 of file BMLStance.cs.

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

- C:/Users/Chris021/OneDrive - Universiteit Utrecht/project/rage/BML-Realizer/RageBMLRealizer/BML↩ Realizer/BMLStance.cs

5.21 BMLRealizer.BMLSyncPoint Class Reference

BML Sync Point class possible format: behavior_id:sync_id [+/- offset] A reference to a sync point of another behavior, optionally with a float offset in seconds. By default, this is a behavior in the same <bml> block that the syncref is contained in; if optional prefix block_id: is present, the syncref specifies a sync point of a behavior in the <bml> block with that ID.) offset: A positive float offset in seconds relative to the start time of the surrounding <bml> block.

Public Member Functions

- BMLSyncPoint (BMLBlock parent, string eventName, string value)

  the contructor of BML Sync Point.
- void Update (RageBMLNet bmlNet)

  function that need to be called everytime the realizer update is called
- bool TriggerSyncPoint ()

  trigger this syncpoint to complete
- bool IsCompleted ()

  is this syncpoint already completed ?
- bool IsTimerSafe (Dictionary< string, BMLBlock > blocks, float globalTimer)

  function to check whether the timer variable is safe to used or not

5.21.1 Detailed Description

BML Sync Point class possible format: behavior_id:sync_id [+/- offset] A reference to a sync point of another behavior, optionally with a float offset in seconds. By default, this is a behavior in the same <bml> block that the syncref is contained in; if optional prefix block_id: is present, the syncref specifies a sync point of a behavior in the <bml> block with that ID.) offset: A positive float offset in seconds relative to the start time of the surrounding <bml> block.

Definition at line 33 of file BMLSyncPoint.cs.

5.21.2 Constructor & Destructor Documentation

5.21.2.1 BMLSyncPoint()

```
BMLRealizer.BMLSyncPoint.BMLSyncPoint (
            BMLBlock parent,
            string eventName,
            string value )
```

the contructor of BML Sync Point.

Parameters

eventName	

the name of sync point event (start, ready, strokeStart, attackPeak, stroke, strokeEnd, relax, end)

Parameters

value	

the atribute value that we need to parse.

Definition at line 76 of file BMLSyncPoint.cs.

5.21.3 Member Function Documentation

5.21.3.1 IsCompleted()

```
bool BMLRealizer.BMLSyncPoint.IsCompleted ( )
```

is this syncpoint already completed ?

Returns

Definition at line 187 of file BMLSyncPoint.cs.

5.21.3.2 IsTimerSafe()

```
bool BMLRealizer.BMLSyncPoint.IsTimerSafe (
            Dictionary< string, BMLBlock > blocks,
            float globalTimer )
```

function to check whether the timer variable is safe to used or not

Parameters

realizer	

Returns

Definition at line 197 of file BMLSyncPoint.cs.

5.21.3.3 TriggerSyncPoint()

```
bool BMLRealizer.BMLSyncPoint.TriggerSyncPoint ( )
```

trigger this syncpoint to complete

Returns

Definition at line 171 of file BMLSyncPoint.cs.

5.21.3.4 Update()

```
void BMLRealizer.BMLSyncPoint.Update (
            RageBMLNet bmlNet )
```

function that need to be called everytime the realizer update is called

Parameters

realizer	

The realizer

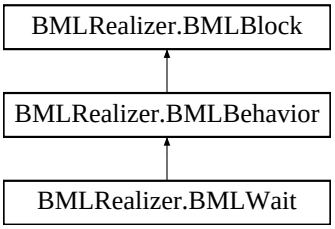
Definition at line 131 of file BMLSyncPoint.cs.

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

- C:/Users/Chris021/OneDrive - Universiteit Utrecht/project/rage/BML-Realizer/RageBMLRealizer/BML↩ Realizer/BMLSyncPoint.cs

5.22 BMLRealizer.BMLWait Class Reference

Inheritance diagram for BMLRealizer.BMLWait:



Public Member Functions

- BMLWait ()
  constructor
- override void Parse (XmlReader reader)
  parsing the XML atribute: duration

Public Attributes

- float duration
  the duration of the wait in seconds

Additional Inherited Members

5.22.1 Detailed Description

Definition at line 21 of file BMLWait.cs.

5.22.2 Constructor & Destructor Documentation

5.22.2.1 BMLWait()

```
BMLRealizer.BMLWait.BMLWait ( )
```

constructor

Definition at line 31 of file BMLWait.cs.

5.22.3 Member Function Documentation

5.22.3.1 Parse()

```
override void BMLRealizer.BMLWait.Parse (
            XmlReader reader )  [virtual]
```

parsing the XML atribute: duration

Parameters

reader	

Reimplemented from BMLRealizer.BMLBehavior.

Definition at line 41 of file BMLWait.cs.

5.22.4 Member Data Documentation

5.22.4.1 duration

```
float BMLRealizer.BMLWait.duration
```

the duration of the wait in seconds

Definition at line 26 of file BMLWait.cs.

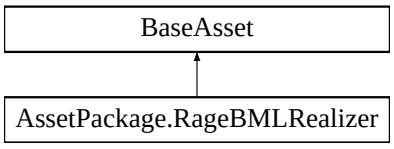
The documentation for this class was generated from the following file:

- C:/Users/Chris021/OneDrive - Universiteit Utrecht/project/rage/BML-Realizer/RageBMLRealizer/BML↩ Realizer/BMLWait.cs

5.23 AssetPackage.RageBMLRealizer Class Reference

An BMLRealizer Rage asset

Inheritance diagram for AssetPackage.RageBMLRealizer:



Public Member Functions

- delegate void SyncPointCompleted (string id, string eventName)

  callback function. it will be called when the specific sync point is completed
- RageBMLRealizer ()

  Initializes a new instance of the RageBMLRealizer.Asset class.
- void **ParseFromFile** (string filename)
- void **ParseFromString** (string xml)
- void Update (float deltaTime)

  update function will be called everytime when the program is run. it can be called inside Unity Update function
- void TriggerSyncPoint (string id, string eventName)

  this function can be called from outside library to trigger sync point.
- BMLBlock GetBehaviorFromId (string id)

  function to get behavior from ID

Public Attributes

- SyncPointCompleted **OnSyncPointCompleted**

Properties

- override ISettings Settings `[get, set]`

  Gets or sets options for controlling the operation.
- Dictionary< string, BMLBlock > ScheduledBlocks `[get]`

  the dictionary that hold the blocks / behavior that need to be run
- float Timer `[get]`

  global timer

5.23.1 Detailed Description

An BMLRealizer Rage asset

Definition at line 37 of file RageBMLRealizer.cs.

5.23.2 Constructor & Destructor Documentation

5.23.2.1 RageBMLRealizer()

```
AssetPackage.RageBMLRealizer.RageBMLRealizer ( )
```

Initializes a new instance of the RageBMLRealizer.Asset class.

Create Settings and let it's BaseSettings class assign Defaultvalues where it can.

Definition at line 76 of file RageBMLRealizer.cs.

5.23.3 Member Function Documentation

5.23.3.1 GetBehaviorFromId()

```
BMLBlock AssetPackage.RageBMLRealizer.GetBehaviorFromId (
            string id )
```

function to get behavior from ID

Parameters

id	

Returns

Definition at line 231 of file RageBMLRealizer.cs.

5.23.3.2 SyncPointCompleted()

```
delegate void AssetPackage.RageBMLRealizer.SyncPointCompleted (
            string id,
            string eventName )
```

callback function. it will be called when the specific sync point is completed

Parameters

id	

the ID of block

Parameters

eventName	

the event name of sync point (start, ready, strokeStart, attackPeak, stroke, strokeEnd, relax, end)

5.23.3.3 TriggerSyncPoint()

```
void AssetPackage.RageBMLRealizer.TriggerSyncPoint (
            string id,
            string eventName )
```

this function can be called from outside library to trigger sync point.

Parameters

id	

the ID of the block where the sync point is resided

Parameters

eventName	

the event name of sync point (start, ready, strokeStart, attackPeak, stroke, strokeEnd, relax, end)

Definition at line 211 of file RageBMLRealizer.cs.

5.23.3.4 Update()

```
void AssetPackage.RageBMLRealizer.Update (
            float deltaTime )
```

update function will be called everytime when the program is run. it can be called inside Unity Update function

Parameters

deltaTime	

the time from last called

Definition at line 193 of file RageBMLRealizer.cs.

5.23.4 Property Documentation

5.23.4.1 ScheduledBlocks

```
Dictionary<string, BMLBlock> AssetPackage.RageBMLRealizer.ScheduledBlocks  [get]
```

the dictionary that hold the blocks / behavior that need to be run

Definition at line 150 of file RageBMLRealizer.cs.

5.23.4.2 Settings

```
override ISettings AssetPackage.RageBMLRealizer.Settings  [get], [set]
```

Gets or sets options for controlling the operation.

Besides the toXml() and fromXml() methods, we never use this property but use it's correctly typed backing field 'settings' instead.

This property should go into each asset having Settings of its own.

The actual class used should be derived from BaseAsset (and not directly from ISetting).

The settings.

Definition at line 135 of file RageBMLRealizer.cs.

5.23.4.3 Timer

```
float AssetPackage.RageBMLRealizer.Timer  [get]
```

global timer

Definition at line 161 of file RageBMLRealizer.cs.

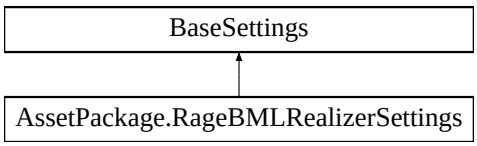
The documentation for this class was generated from the following file:

- C:/Users/Chris021/OneDrive - Universiteit Utrecht/project/rage/BML-Realizer/RageBMLRealizer/RageBML↩ Realizer.cs

5.24 AssetPackage.RageBMLRealizerSettings Class Reference

An asset settings.

Inheritance diagram for AssetPackage.RageBMLRealizerSettings:



Public Member Functions

- RageBMLRealizerSettings ()

  Initializes a new instance of the RageBMLRealizer.AssetSettings class.

5.24.1 Detailed Description

An asset settings.

BaseSettings contains the (de-)serialization methods.

Definition at line 28 of file RageBMLRealizerSettings.cs.

5.24.2 Constructor & Destructor Documentation

5.24.2.1 RageBMLRealizerSettings()

```
AssetPackage.RageBMLRealizerSettings.RageBMLRealizerSettings ( )
```

Initializes a new instance of the RageBMLRealizer.AssetSettings class.

Definition at line 35 of file RageBMLRealizerSettings.cs.

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

- C:/Users/Chris021/OneDrive - Universiteit Utrecht/project/rage/BML-Realizer/RageBMLRealizer/RageBML↩ RealizerSettings.cs

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