

Social Importance Asset

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2 Hierarchical Index

2.1 Class Hierarchy

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

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SocialImportance.DTOs.ConferralDTO	17
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3 Class Index

3.1 Class List

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

ActionLibrary.DTOs.ActionDefinitionDTO	
Data Type Object Class for defining an Action.	5
ActionLibrary.IAction	
Interface used to represent an action execution request.	6
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SocialImportance.SocialImportanceAsset	
Main class of the Social Importance Asset.	19

4 Namespace Documentation

4.1 ActionLibrary Namespace Reference

Namespaces

Classes

- interface [IAction](#)
Interface used to represent an action execution request.

4.2 ActionLibrary.DTOs Namespace Reference

Classes

- class [ActionDefinitionDTO](#)
Data Type Object Class for defining an Action.

4.3 KnowledgeBase Namespace Reference

Namespaces

4.4 KnowledgeBase.Conditions Namespace Reference

Enumerations

- enum [LogicalQuantifier](#) : byte { [LogicalQuantifier.Existential](#), [LogicalQuantifier.Universal](#) }
Represents logical quantification modes

4.4.1 Enumeration Type Documentation

4.4.1.1 enum KnowledgeBase.Conditions.LogicalQuantifier : byte [strong]

Represents logical quantification modes

Enumerator

Existential Sets of conditions evaluated in this mode, return true if at least on possible case is considered valid.

Universal Sets of conditions evaluated in this mode, return true only if all the possible cases are considered valid.

4.5 KnowledgeBase.DTOs Namespace Reference

Namespaces

4.6 KnowledgeBase.DTOs.Conditions Namespace Reference

Classes

- class [ConditionSetDTO](#)
Data Type Object Class for the representation of a condition set

4.7 KnowledgeBase.WellFormedNames Namespace Reference

Classes

- class [Name](#)
Well Formed [Name](#) Class.

4.8 SocialImportance Namespace Reference

Namespaces

Classes

- class [SocialImportanceAsset](#)
Main class of the Social Importance Asset.

4.9 SocialImportance.DTOs Namespace Reference

Classes

- class [AttributionRuleDTO](#)
Data Type Object Class for defining a Social Importance's Attribution Rule.
- class [ClaimDTO](#)
Data Type Object Class for defining a Social Importance's Claim.
- class [ConferralDTO](#)
Data Type Object Class for defining a Social Importance's Conferral action.
- class [SocialImportanceDTO](#)
Data Type Object Class for defining a Social Importance Asset components.

5 Class Documentation

5.1 ActionLibrary.DTOs.ActionDefinitionDTO Class Reference

Data Type Object Class for defining an Action.

Inherited by [SocialImportance.DTOs.ConferralDTO](#).

Properties

- Guid **Id** [get, set]
The unique identifier of the action that this DTO is describing
- string **Action** [get, set]
The action template, as a well formed string.
- string **Target** [get, set]
The target of the action, if any.
- [ConditionSetDTO](#) **Conditions** [get, set]
The set of conditions that must be true for this action execution.

5.1.1 Detailed Description

Data Type Object Class for defining an Action.

5.1.2 Property Documentation

5.1.2.1 string ActionLibrary.DTOs.ActionDefinitionDTO.Action [get], [set]

The action template, as a well formed string.

Attack([type],[strength])

5.1.2.2 ConditionSetDTO ActionLibrary.DTOs.ActionDefinitionDTO.Conditions [get], [set]

The set of conditions that must be true for this action execution.

5.1.2.3 Guid ActionLibrary.DTOs.ActionDefinitionDTO.Id [get], [set]

The unique identifier of the action that this DTO is describing

5.1.2.4 string ActionLibrary.DTOs.ActionDefinitionDTO.Target [get], [set]

The target of the action, if any.

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

- ActionDefinitionDTO.cs

5.2 ActionLibrary.IAction Interface Reference

Interface used to represent an action execution request.

Properties

- **Name ActionName** [get]
The name of the action to execute
- **Name Target** [get]
The target of the action, if applicable
- **IList< Name > Parameters** [get]
The parameters values that the action needs in order for it to be executed. The parameter order is equal to the order of the variables in the action template, defined in the correspondent ActionDefinitionDTO.

5.2.1 Detailed Description

Interface used to represent an action execution request.

5.2.2 Property Documentation

5.2.2.1 Name ActionLibrary.IAction.ActionName [get]

The name of the action to execute

5.2.2.2 IList<Name> ActionLibrary.IAction.Parameters [get]

The parameters values that the action needs in order for it to be executed. The parameter order is equal to the order of the variables in the action template, defined in the correspondent ActionDefinitionDTO.

5.2.2.3 Name ActionLibrary.IAction.Target [get]

The target of the action, if applicable

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

- IAction.cs

5.3 KnowledgeBase.DTOs.Conditions.ConditionSetDTO Class Reference

Data Type Object Class for the representation of a condition set

Public Attributes

- string[] **ConditionSet**
The conditions to be evaluated as a single set.

Properties

- [LogicalQuantifier Quantifier](#) [get, set]

The logical quantifier of this condition set. Used to change how the entier condition set is evaluated.

5.3.1 Detailed Description

Data Type Object Class for the representation of a condition set

5.3.2 Member Data Documentation

5.3.2.1 string [] KnowledgeBase.DTOs.Conditions.ConditionSetDTO.ConditionSet

The conditions to be evaluated as a single set.

5.3.3 Property Documentation

5.3.3.1 LogicalQuantifier KnowledgeBase.DTOs.Conditions.ConditionSetDTO.Quantifier [get], [set]

The logical quantifier of this condition set. Used to change how the entier condition set is evaluated.

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

- ConditionSetDTO.cs

5.4 KnowledgeBase.WellFormedNames.Name Class Reference

Well Formed [Name](#) Class.

Inherits [IGroundable< Name >](#), [IComparable< Name >](#), [IPerspective< Name >](#), and [ICloneable](#).

Public Member Functions

- abstract [Name GetFirstTerm](#) ()
Returns the first term of this [Name](#). Primitive and Variable Names will always return them selfs.
- abstract [IEnumerable< Name > GetTerms](#) ()
Return all terms contained inside this [Name](#).
- abstract [Name GetNTerm](#) (int index)
Return the term at the specified index.
- abstract [IEnumerable< Name > GetLiterals](#) ()
Generates a sequence of all Names contained inside this [Name](#).
- abstract [IEnumerable< Name > GetVariables](#) ()
Generates a sequence of all variables contained inside this [Name](#).
- abstract bool [HasGhostVariable](#) ()
Tells if this name contains a Ghost variable
- abstract bool [HasSelf](#) ()

- Tells if this name contains a SELF primitive.*
- bool **ContainsVariable** (**Name** variable)
 - Verifies if a specific variable is contained inside this **Name**.*
- **Name ApplyPerspective** (**Name** name)
 - Swaps every instance of the given **Name** with the SELF primitive.*
- **Name RemovePerspective** (**Name** name)
 - Swaps every instance of the SELF primitive with the given **Name**.*
- abstract **Name SwapPerspective** (**Name** original, **Name** newName)
 - Swaps every instance of the requested **Name** with another.*
- abstract **Name MakeGround** (SubstitutionSet bindings)
 - Given a SubstitutionSet, tries to ground this **Name** by substituting every variable with the corresponding value.*
- abstract **Name ReplaceUnboundVariables** (string id)
 - Adds a tag to the end of every variable inside this **Name**, effectively modifying their identifier.*
- abstract **Name RemoveBoundedVariables** (string id)
 - Removes a tag from the end of every variable inside this **Name**, effectively modifying their identifier.*
- abstract object **Clone** ()
 - Clones this **Name**, returning an equal copy. If this clone is changed afterwards, the original object remains the same.*
- abstract bool **Match** (**Name** name)
 - Determines if this matches the given name template. Both Names are matched to each other if all their Symbols are equal to one another or if a Symbol matches a universal Symbol.*
- abstract **Name ApplyToTerms** (Func< **Name**, **Name** > transformFunction)
 - Apply a transformation function to this **Name**. The function will receive every term of this name, and should return a name to be swapped with the old one.*

Static Public Member Functions

- static **Name GenerateUniqueGhostVariable** ()
 - Creates a new **Name**, representing a variable without a proper human readable identifier. Usefull to create temporary substitution variables.*
- static **operator Name** (string definition)
 - Explicit cast from a string to a **Name**. Similar from calling **Name.Build**(string)*
- static bool **operator==** (**Name** n1, **Name** n2)
 - Name** comparison operator. Tells if two names are equal to one another.*
- static bool **operator!=** (**Name** n1, **Name** n2)
 - Name** comparison operator. Tells if two names are diferent from one another.*
- static **Name BuildName** (**Name** rootTerm, **Name** firstTerm, params **Name**[] otherTerms)
 - Creates a composed **Name**, using two or more Names*
- static **Name BuildName** (IEnumerable< **Name** > terms)
 - Creates a **Name**, using a sequence of Names.*
- static **Name BuildName** (string str)
 - Creates a new **Name** instance by parsing a string.*

Public Attributes

- const string **NIL_STRING** = "-"
- The string representation of a **NIL** value **Name**.*
- const string **SELF_STRING** = "SELF"
- The string representation of the **"SELF"** primitive **Name**.*
- const string **UNIVERSAL_STRING** = "*"
- The string representation of the Universal matching **Name**.*

- readonly bool [IsUniversal](#)
Tells if this is name the Universal Matching Symbol
- readonly bool [IsConstant](#)
Tells if this name does not contain universal or variable Symbols
- readonly bool [IsVariable](#)
Tells if this name is a variable definition
- readonly bool [IsPrimitive](#)
Tells if this name is a primitive value
- readonly bool [IsComposed](#)
Tells if this name is a composition of other names

Static Public Attributes

- static readonly [Name](#) [NIL_SYMBOL](#)
A constant containing an instance of a NIL [Name](#)
- static readonly [Name](#) [SELF_SYMBOL](#)
A constant containing an instance of a SELF [Name](#)
- static readonly [Name](#) [UNIVERSAL_SYMBOL](#)
A constant containing an instance of a Universal matching [Name](#)

Properties

- bool [IsGrounded](#) [get]
Tells if this name is grounded. A grounded [Name](#) is one that do not contain variables.
- abstract int [NumberOfTerms](#) [get]
The number of terms that compose this name. Primitive and Variable Names will always return 1.

5.4.1 Detailed Description

Well Formed [Name](#) Class.

A well formed name is used to specify goal/action names, objects, properties, constants, and relations.

Its syntax is based on first order logic symbols, variables and predicates.

Names can be generated from strings, or from composition with other names. All names are case-insensitive.

Even though the [Name](#) is class type, its underlying behaviour is similar to a value type structure. This means that every modification to its values, returns a new instance of a [Name](#) object, preserving the state of the original one.

By default, Names separated in the following categories:

- Primitives
 - John
 - Dog
 - Blue
 - 34.5
- Variables
 - [x]
 - [strength]
- Composed Names
 - Color(Sky)
 - Likes(John)
 - Size(Ball)
 - Kick(Hard, Low)

5.4.2 Member Function Documentation

5.4.2.1 Name KnowledgeBase.WellFormedNames.Name.ApplyPerspective (Name *name*)

Swaps every instance of the given [Name](#) with the SELF primitive.

Parameters

<i>name</i>	The Name instance to swap from.
-------------	---

Returns

A new instance, which is a clone of this [Name](#), but with every instance of the given [Name](#) swaped with SELF.

5.4.2.2 abstract Name KnowledgeBase.WellFormedNames.Name.ApplyToTerms (Func< Name, Name > *transformFunction*) [pure virtual]

Apply a transformation function to this [Name](#). The function will receive every term of this name, and should return a name to be swapped with the old one.

Parameters

<i>transformFunction</i>	The function we want to apply to this Name .
--------------------------	--

Returns

A new [Name](#) instance, which is the original one with the transformed function applied.

5.4.2.3 static Name KnowledgeBase.WellFormedNames.Name.BuildName (Name *rootTerm*, Name *firstTerm*, params Name[] *otherTerms*) [static]

Creates a composed [Name](#), using two or more Names

Parameters

<i>rootTerm</i>	The Name that will be root of the composed Name .
<i>firstTerm</i>	The first term of the composed Name .
<i>otherTerms</i>	The remaining terms of the composed Name .

Exceptions

<i>ArgumentException</i>	Thrown if the rootTerm is not a primitive Name .
--------------------------	--

5.4.2.4 static Name KnowledgeBase.WellFormedNames.Name.BuildName (IEnumerable< Name > *terms*) [static]

Creates a [Name](#), using a sequence of Names.

Parameters

<i>terms</i>	The Name set used to generate the new one.
--------------	--

Exceptions

<i>ArgumentException</i>	Thrown if the first element of the set is not a primitive Name .
--------------------------	--

5.4.2.5 static [Name](#) KnowledgeBase.WellFormedNames.Name.BuildName (string *str*) [static]

Creates a new [Name](#) instance by parsing a string.

Parameters

<i>str</i>	The string to parse.
------------	----------------------

Exceptions

<i>ArgumentException</i>	Thrown if the given string is empty.
--------------------------	--------------------------------------

5.4.2.6 abstract object KnowledgeBase.WellFormedNames.Name.Clone () [pure virtual]

Clones this [Name](#), returning an equal copy. If this clone is changed afterwards, the original object remains the same.

Returns

The [Name](#)'s copy.

5.4.2.7 bool KnowledgeBase.WellFormedNames.Name.ContainsVariable ([Name](#) *variable*)

Verifies if a specific variable is contained inside this [Name](#).

Parameters

<i>variable</i>	The variable Name we want to verify
-----------------	---

Exceptions

<i>ArgumentException</i>	Thrown if the given argument is not a variable definition.
--------------------------	--

5.4.2.8 static [Name](#) KnowledgeBase.WellFormedNames.Name.GenerateUniqueGhostVariable () [static]

Creates a new [Name](#), representing a variable without a proper human readable identifier. Usefull to create temporary substitution variables.

5.4.2.9 `abstract Name KnowledgeBase.WellFormedNames.Name.GetFirstTerm () [pure virtual]`

Returns the first term of this [Name](#). Primitive and Variable Names will always return them selfs.

5.4.2.10 `abstract IEnumerable<Name> KnowledgeBase.WellFormedNames.Name.GetLiterals () [pure virtual]`

Generates a sequence of all Names contained inside this [Name](#).

5.4.2.11 `abstract Name KnowledgeBase.WellFormedNames.Name.GetNTerm (int index) [pure virtual]`

Return the term at the specified index.

Parameters

<i>index</i>	The zero-based index of the term to get.
--------------	--

Exceptions

<i>IndexOutOfRangeException</i>	Thrown if the given index is out of bounds.
---------------------------------	---

- For Primitive or Variable Names, any index different from 0, will throw an `IndexOutOfRangeException`.
- Using this method with a 0 index is the same as using [GetFirstTerm\(\)](#)

5.4.2.12 `abstract IEnumerable<Name> KnowledgeBase.WellFormedNames.Name.GetTerms () [pure virtual]`

Return all terms contained inside this [Name](#).

5.4.2.13 `abstract IEnumerable<Name> KnowledgeBase.WellFormedNames.Name.GetVariables () [pure virtual]`

Generates a sequence of all variables contained inside this [Name](#).

5.4.2.14 `abstract bool KnowledgeBase.WellFormedNames.Name.HasGhostVariable () [pure virtual]`

Tells if this name contains a Ghost variable

[GenerateUniqueGhostVariable\(\)](#)

5.4.2.15 `abstract bool KnowledgeBase.WellFormedNames.Name.HasSelf () [pure virtual]`

Tells if this name contains a SELF primitive.

5.4.2.16 `abstract Name KnowledgeBase.WellFormedNames.Name.MakeGround (SubstitutionSet bindings) [pure virtual]`

Given a `SubstitutionSet`, tries to ground this [Name](#) by substituting every variable with the corresponding value.

Parameters

<i>bindings</i>	The SubstitutionSet to be used to ground this Name .
-----------------	--

Returns

A new instance, which is a clone of this [Name](#), but grounded as much as possible.

- If this instance is already grounded before calling this method, it will just return the same [Name](#).
- This method does not warrant that this [Name](#) will be fully grounded, as the given SubstitutionSet may not contain the substitution variables needed to perform the task.

5.4.2.17 `abstract bool KnowledgeBase.WellFormedNames.Name.Match (Name name) [pure virtual]`

Determines if this matches the given name template. Both Names are matched to each other if all their Symbols are equal to one another or if a Symbol matches a universal Symbol.

Parameters

<i>name</i>	The Name to match with this instance.
-------------	---

Returns

True if both Names match with each other, false otherwise.

5.4.2.18 `static KnowledgeBase.WellFormedNames.Name.operator Name (string definition) [explicit],[static]`

Explicit cast from a string to a [Name](#). Similar from calling Name.Build(string)

5.4.2.19 `static bool KnowledgeBase.WellFormedNames.Name.operator!= (Name n1, Name n2) [static]`

[Name](#) comparison operator. Tells if two names are different from one another.

5.4.2.20 `static bool KnowledgeBase.WellFormedNames.Name.operator== (Name n1, Name n2) [static]`

[Name](#) comparison operator. Tells if two names are equal to one another.

5.4.2.21 `abstract Name KnowledgeBase.WellFormedNames.Name.RemoveBoundedVariables (string id) [pure virtual]`

Removes a tag from the end of every variable inside this [Name](#), effectively modifying their identifier.

Parameters

<i>id</i>	The tag to remove from every variable.
-----------	--

Returns

A new instance, which is a clone of this [Name](#), but with every variable identifier changed in order to exclude the requested tag.

///

- If this instance is already grounded before calling this method, it will just return the same [Name](#).
- The tag is only removed if, and only if, the variable identifier ends with the requested tag.

5.4.2.22 **Name** KnowledgeBase.WellFormedNames.Name.RemovePerspective (**Name** *name*)

Swaps every instance of the SELF primitive with the given [Name](#).

Parameters

<i>name</i>	The Name instance to swap to.
-------------	---

Returns

A new instance, which is a clone of this [Name](#), but with every instance of SELF swapped with the given [Name](#).

5.4.2.23 **abstract Name** KnowledgeBase.WellFormedNames.Name.ReplaceUnboundVariables (**string** *id*) [pure virtual]

Adds a tag to the end of every variable inside this [Name](#), effectively modifying their identifier.

Parameters

<i>id</i>	The tag to add to every variable.
-----------	-----------------------------------

Returns

A new instance, which is a clone of this [Name](#), but with every variable identifier changed in order to include the new tag.

///

- If this instance is already grounded before calling this method, it will just return the same [Name](#).

5.4.2.24 **abstract Name** KnowledgeBase.WellFormedNames.Name.SwapPerspective (**Name** *original*, **Name** *newName*) [pure virtual]

Swaps every instance of the requested [Name](#) with another.

Parameters

<i>original</i>	The Name instance to swap from.
<i>newName</i>	The Name instance to swap to.

Returns

A new instance, which is a clone of this [Name](#), but with every instance of the original [Name](#) swaped with the new one.

5.4.3 Member Data Documentation

5.4.3.1 readonly bool KnowledgeBase.WellFormedNames.Name.IsComposed

Tells if this name is a composition of other names

5.4.3.2 readonly bool KnowledgeBase.WellFormedNames.Name.IsConstant

Tells if this name does not contain universal or variable Symbols

5.4.3.3 readonly bool KnowledgeBase.WellFormedNames.Name.IsPrimitive

Tells if this name is a primitive value

5.4.3.4 readonly bool KnowledgeBase.WellFormedNames.Name.IsUniversal

Tells if this is name the Universal Matching Symbol

5.4.3.5 readonly bool KnowledgeBase.WellFormedNames.Name.IsVariable

Tells if this name is a variable definition

5.4.3.6 const string KnowledgeBase.WellFormedNames.Name.NIL_STRING = "-"

The string representation of a **NIL** value [Name](#).

5.4.3.7 const string KnowledgeBase.WellFormedNames.Name.SELF_STRING = "SELF"

The string representation of the **"SELF"** primitive [Name](#).

5.4.3.8 const string KnowledgeBase.WellFormedNames.Name.UNIVERSAL_STRING = "*"

The string representation of the Universal matching [Name](#).

5.4.4 Property Documentation

5.4.4.1 bool KnowledgeBase.WellFormedNames.Name.IsGrounded [get]

Tells if this name is grounded. A grounded [Name](#) is one that do not contain variables.

5.4.4.2 `abstract int KnowledgeBase.WellFormedNames.Name.NumberOfTerms` [get]

The number of terms that compose this name. Primitive and Variable Names will always return 1.

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

- Name.cs

5.5 SocialImportance.DTOs.AttributionRuleDTO Class Reference

Data Type Object Class for defining a Social Importance's Attribution Rule.

Public Attributes

- string [Target](#)
The condition variable that represents the target name in the rule condition set.
- int [Value](#)
The value to be attributed to the target, if all conditions are valid.
- [ConditionSetDTO Conditions](#)
The condition set used to validate this rule.

5.5.1 Detailed Description

Data Type Object Class for defining a Social Importance's Attribution Rule.

Attribution rules are used to define conditions that when validated through the asset's beliefs will attribute to the target a Social Importance Value. The total Social Importance Value of a target is given by the sum of all valid Attribution rules in the asset's definition.

5.5.2 Member Data Documentation

5.5.2.1 `ConditionSetDTO SocialImportance.DTOs.AttributionRuleDTO.Conditions`

The condition set used to validate this rule.

5.5.2.2 `string SocialImportance.DTOs.AttributionRuleDTO.Target`

The condition variable that represents the target name in the rule condition set.

5.5.2.3 `int SocialImportance.DTOs.AttributionRuleDTO.Value`

The value to be attributed to the target, if all conditions are valid.

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

- AttributionRuleDTO.cs

5.6 SocialImportance.DTOs.ClaimDTO Class Reference

Data Type Object Class for defining a Social Importance's Claim.

Public Attributes

- string [ActionTemplate](#)
The action's name template used for action matching.
- uint [ClaimSI](#)
The maximum Social Importance value the action's target can have, before the action is considered socially unacceptable.

5.6.1 Detailed Description

Data Type Object Class for defining a Social Importance's Claim.

Claims are used to tell if actions are socially acceptable. Socially acceptable actions are ones that the Claim value don't exceed the action's target Social Importance value.

This can be used to filter agent's possible actions remaining only the socially accepted ones, or determine if action targeting the agent is socially accepted or not, according to the agent's beliefs.

5.6.2 Member Data Documentation

5.6.2.1 string SocialImportance.DTOs.ClaimDTO.ActionTemplate

The action's name template used for action matching.

5.6.2.2 uint SocialImportance.DTOs.ClaimDTO.ClaimSI

The maximum Social Importance value the action's target can have, before the action is considered socially unacceptable.

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

- ClaimDTO.cs

5.7 SocialImportance.DTOs.ConferralDTO Class Reference

Data Type Object Class for defining a Social Importance's Conferral action.

Inherits [ActionLibrary.DTOs.ActionDefinitionDTO](#).

Properties

- uint [ConferralSI](#) [get, set]
The Conferral's social importance value.

5.7.1 Detailed Description

Data Type Object Class for defining a Social Importance's Conferral action.

Conferral actions are ones that an agent might want to execute, but only if the action's target's Social Importance value is bellow or equal to the Conferral's Social Importance.

If multiple conferrals are available for execution, the asset will only select the one with the highest social importance value.

Conferrals are bonded by Claims, like any other action, and as such even if a conferral can be executed, if its target's social importance value it's above an action Claim, it will not execute.

See also

[ClaimDTO](#)

5.7.2 Property Documentation

5.7.2.1 uint SocialImportance.DTOs.ConferralDTO.ConferralSI [get], [set]

The Conferral's social importance value.

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

- ConferralDTO.cs

5.8 SocialImportance.DTOs.SocialImportanceDTO Class Reference

Data Type Object Class for defining a Social Importance Asset components.

Public Attributes

- [AttributionRuleDTO\[\] AttributionRules](#)
The set of attribution rules used to calculate Social importance values to targets
- [ClaimDTO\[\] Claims](#)
The set of Claims used to determine if a action is socially acceptable.
- [ConferralDTO\[\] Conferral](#)
The set of Conferrals we want the asset to executed.

5.8.1 Detailed Description

Data Type Object Class for defining a Social Importance Asset components.

5.8.2 Member Data Documentation

5.8.2.1 AttributionRuleDTO [] SocialImportance.DTOs.SocialImportanceDTO.AttributionRules

The set of attribution rules used to calculate Social importance values to targets

5.8.2.2 ClaimDTO [] SocialImportance.DTOs.SocialImportanceDTO.Claims

The set of Claims used to determine if a action is socially acceptable.

5.8.2.3 ConferralDTO [] SocialImportance.DTOs.SocialImportanceDTO.Conferral

The set of Conferrals we want the asset to executed.

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

- SocialImportanceDTO.cs

5.9 SocialImportance.SocialImportanceAsset Class Reference

Main class of the Social Importance Asset.

Inherits LoadableAsset< SocialImportanceAsset >, and ICustomSerialization.

Public Member Functions

- void [BindEmotionalAppraisalAsset](#) (EmotionalAppraisalAsset eaa)
Binds an Emotional Appraisal Asset (EAA) to this Social Importance Asset instance. Without a EAA instance binded to this asset, social importance evaluations will not work. [InvalidateCachedSI\(\)](#) is automatically called by this method.
- float [GetSocialImportance](#) (string target, string perspective="self")
Calculate the Social Importance value of a given target, in a particular perspective. If no perspective is given, the current agent's perspective is used as default.
- void [InvalidateCachedSI](#) ()
Clears all cached Social Importance values, allowing new values to be recalculated upon request.
- [IAction DecideConferral](#) (string perspective)
Request a conferral action from the Social Importance Asset.
- IEnumerable< [IAction](#) > [FilterActions](#) (string perspective, IEnumerable< [IAction](#) > actionsToFilter)
Filters a set of actions using the defined Social Importance Claims.
- void [LoadFromDTO](#) ([SocialImportanceDTO](#) dto)
Load a Social Importance Asset definition from a DTO object.
- [SocialImportanceDTO GetDTO](#) ()
Returns a DTO containing all the asset's configurations.

Properties

- EmotionalAppraisalAsset [LinkedEA](#) [get]
The Emotional Appraisal Asset that is binded to this Social Importance Asset instance

5.9.1 Detailed Description

Main class of the Social Importance Asset.

New dynamic properties available by this asset upon binding it with a Emotional Appraisal Asset:

- SI([target])
– Gives the Social Importance value attributed to the given target

5.9.2 Member Function Documentation

5.9.2.1 void SocialImportance.SocialImportanceAsset.BindEmotionalAppraisalAsset (EmotionalAppraisalAsset eaa)

Binds an Emotional Appraisal Asset (EAA) to this Social Importance Asset instance. Without a EAA instance binded to this asset, social importance evaluations will not work. [InvalidateCachedSI\(\)](#) is automatically called by this method.

Parameters

<i>eea</i>	The Emotional Appraisal Asset to be binded to this asset.
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5.9.2.2 **IAction SocialImportance.SocialImportanceAsset.DecideConferral** (*string perspective*)

Request a conferral action from the Social Importance Asset.

The action will be generated based on the defined Conferrals, and will always be the maximum valued conferral that can still respect the asset's defined Claims.

Parameters

<i>perspective</i>	From which perspective do we want to generate the action. If the perspective is diferent from "self", it will be like the asset predicting which action will be executed by the entity defined in the perspective.
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Returns

The action we want to execute or predict.

5.9.2.3 **IEnumerable<IAction> SocialImportance.SocialImportanceAsset.FilterActions** (*string perspective*, **IEnumerable<IAction>** *actionsToFilter*)

Filters a set of actions using the defined Social Importance Claims.

Parameters

<i>perspective</i>	From which perspective do we want to filter the actions. If the perspective is diferent from "self", it will be like the asset is evaluating desirable action from another entity's point of view.
<i>actionsToFilter</i>	The set of actions we want to filter.

Returns

The set of filtered actions. No action returned will have a Claim value higher that the Social Importance attributed to the target of the action.

ClaimDTO

5.9.2.4 **SocialImportanceDTO SocialImportance.SocialImportanceAsset.GetDTO** ()

Returns a DTO containing all the asset's configurations.

5.9.2.5 **float SocialImportance.SocialImportanceAsset.GetSocialImportance** (*string target*, *string perspective* = "self")

Calculate the Social Importance value of a given target, in a particular perspective. If no perspective is given, the current agent's perspective is used as default.

All values calculated by this method are automatically cached, in order to optimize future searches. If the values are needed to be recalculated, call [InvalidateCachedSI\(\)](#) to clear the cached values.

Parameters

<i>target</i>	The name of target which we want to calculate the SI
<i>perspective</i>	From which perspective do we want to calculate de SI.

Returns

The value of Social Importance attributed to given target by the perspective of a particular agent.

5.9.2.6 void SocialImportance.SocialImportanceAsset.InvalidateCachedSI ()

Clears all cached Social Importance values, allowing new values to be recalculated uppon request.

5.9.2.7 void SocialImportance.SocialImportanceAsset.LoadFromDTO (SocialImportanceDTO dto)

Load a Social Importance Asset definition from a DTO object.

Use this to procedurally configure the asset.

Parameters

<i>dto</i>	The DTO containing the data to load
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5.9.3 Property Documentation**5.9.3.1 EmotionalAppraisalAsset SocialImportance.SocialImportanceAsset.LinkedEA [get]**

The Emotional Appraisal Asset that is binded to this Social Importance Asset instance

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

- SocialImportanceAsset.cs

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