Encumberable

|  |  |
| --- | --- |
| Type: | Behavior |
| Name: | Encumberable |
| Id: | dc8d5961-59e8-4a10-8b38-d9e99394d251 |
| Visual: | <i>e</i> |
| Tooling: | e |
| Version: | 1.0 |

## Definition

A token class that implements this behavior will have restrictions preventing certain behaviors like transferable, burnable, etc. from working while it is encumbered. The encumbering party should make a request to encumber, the owner should be notified about the request, and accept the request, which will finalize the encumbrance and send the EncumberResponse message to the requestor.

## Example

For example, a property title's owner may have obtained a loan from a bank to purchase the property. The loan represents a contract between the owner of the property and the bank, this loan encumbers the property title preventing the owner from being able to sell the property, transferable, to another party until the loan is paid off. Paying off the loan will remove the encumber, which will allow transferable to be invoked.

## Analogies

|  |  |
| --- | --- |
| Name | Description |
| Loan | A token can represent an asset that the owner took out a loan to obtain. If so, the token will need to be encumbered by the loan contract preventing the owner from selling the asset until the loan is repaid. |

## Comments

The token definition should have a Encumbered property or structure that may allow only one encumber or allow multiple.

## Dependencies

|  |  |  |
| --- | --- | --- |
| Artifact Type | Symbol | Description |

## Incompatible With

|  |  |  |
| --- | --- | --- |
| Artifact Type | Symbol | Id |

## Influenced By

|  |  |  |
| --- | --- | --- |
| Description | Symbol | Applies To |

## Artifact Files

|  |  |  |
| --- | --- | --- |
| Content Type | File Name | File Content |
| Control | encumberable.proto |  |
| Uml | encumberable.md |  |

## Code Map

|  |  |  |  |
| --- | --- | --- | --- |
| Map Type | Name | Platform | Location |
| SourceCode | Code 1 | Daml |  |

## Implementation Map

|  |  |  |  |
| --- | --- | --- | --- |
| Map Type | Name | Platform | Location |
| Implementation | Implementation 1 | ChaincodeGo |  |

## Resource Map

|  |  |  |  |
| --- | --- | --- | --- |
| Map Type | Name | Location | Description |
| Resource | Regulation Reference 1 |  |  |

# Behavior Details

|  |  |
| --- | --- |
| Is External: | False |
| Constructor: |  |

### Invocations

#### EncumberRequest

Id: bdc69e47-8320-4f54-8a03-0f54c376e113

Description: A Request by a party or account, perhaps a contract or another token, to encumber the token.

##### Request

Control Message: EncumberRequest

Description: The request

###### Parameters

|  |  |
| --- | --- |
| Name | Value |
| Name of Encumber | Name of the institution requesting the encumber. |
| Identifier | A public key or address for the requestor. |
| Signature | A digital signature or attestation, optional. |

##### Response

Control Message: EncumberResponse

Description: The response

###### Parameters

|  |  |
| --- | --- |
| Name | Value |
| Confirmation | A confirmation response from the token for the encumber request. |

#### AcceptEncumberRequest

Id: efd8bb57-4904-481e-976d-8a20a33df602

Description: A Request by a party or account, perhaps a contract or another token, to encumber the token. Once accepted, the token should add a new entry into the Encumbrances property.

##### Request

Control Message: AcceptEncumberRequest

Description: The request

###### Parameters

|  |  |
| --- | --- |
| Name | Value |

##### Response

Control Message: AcceptEncumberResponse

Description: The response

###### Parameters

|  |  |
| --- | --- |
| Name | Value |
| Confirmation | A confirmation response returned to the owner of their acceptance. |

#### RemoveEncumberRequest

Id: 4532c466-bb6d-482a-b2cc-5285ba1f8259

Description: A Request by encumbrancer, perhaps a contract or another token, to remove their encumber or lien from the token. Which should remove any restrictions from behaviors if there are no more encumbers. Only the owner of the encumber can remove their encumber.

##### Request

Control Message: RemoveEncumberRequest

Description: The request

###### Parameters

|  |  |
| --- | --- |
| Name | Value |

##### Response

Control Message: RemoveEncumberResponse

Description: The response

###### Parameters

|  |  |
| --- | --- |
| Name | Value |
| Confirmation | A confirmation receipt or denial be returned to the RemoveEncumber requestor. |

### Properties

#### Name: Encumbrances

Value Description: List of Encumbered

Template Value:

### Invocations

#### GetEncumbrancesRequest

Id: 9e39bf6a-74dc-4ca1-a709-5db247aaa31b

Description: The property value.

##### Request

Control Message: GetEncumbrancesRequest

Description:

###### Parameters

|  |  |
| --- | --- |
| Name | Value |

##### Response

Control Message: GetEncumbrancesResponse

Description: Return value

###### Parameters

|  |  |
| --- | --- |
| Name | Value |
| Encumbrances | List of Encumbered |

### Properties

#### Name: Encumbered

Value Description: True or False

Template Value:

### Invocations

#### GetEncumberedRequest

Id: f35cdfee-d2f4-4a01-bf9b-33774b5df241

Description: The property value.

##### Request

Control Message: GetEncumberedRequest

Description:

###### Parameters

|  |  |
| --- | --- |
| Name | Value |

##### Response

Control Message: GetEncumberedResponse

Description: Return value

###### Parameters

|  |  |
| --- | --- |
| Name | Value |
| Encumbered | True or False |

### Properties