|  |  |
| --- | --- |
| Author:  |  |
|  |  |
|  |  |
|  |  |
| Department:  | Research & Development |

# Document Interface Specification

# Versioning

|  |  |
| --- | --- |
| **Interface** | **Version** |

|  |  |
| --- | --- |
|  |  |

# Software Interface Design

## Syntax

### Data types and constants

#### Global User-Defined Types

**PRIMITIVE TYPES**

|  |
| --- |
|  |
|  |
|  |

**ENUMS**

|  |
| --- |
|  |
|  |

|  |  |
| --- | --- |
|  |  |

|  |
| --- |
|  |

**RECORD TYPES**

|  |
| --- |
|  **extends**  |
|  |

|  |  |  |  |
| --- | --- | --- | --- |
|  | Range:Min: Max:  |  |  |

|  |
| --- |
|  |

**VECTOR TYPES**

|  |  |
| --- | --- |
|  =  |  |

**Primitive Type Mappings**

|  |  |
| --- | --- |
| **Primitive type** | **Target C++ type** |

|  |  |
| --- | --- |
|  |  |

#### Interface

PRIMITIVE TYPES

|  |
| --- |
|  |
|  |
|  |

ENUMS

|  |
| --- |
|  |
|  |

|  |  |
| --- | --- |
|  |  |

|  |
| --- |
|  |

RECORD TYPES

|  |
| --- |
|  **extends**  |
|  |

|  |  |  |
| --- | --- | --- |
|  |  |  |

|  |
| --- |
|  |

VECTOR TYPES

|  |  |
| --- | --- |
|  =  |  |

Primitive Type Mappings

|  |  |
| --- | --- |
| **Primitive type** | **Target C++ type** |

|  |  |
| --- | --- |
|  |  |

### Signature

#### Interface

COMMANDS

|  |
| --- |
|  ( , )  |
| Description |   |

|  |  |
| --- | --- |
| Parameter  |  |

|  |  |
| --- | --- |
| Returns |   |

|  |
| --- |
|  |

SIGNALS

|  |
| --- |
| ( , ) |
| Description |  |

|  |  |
| --- | --- |
| Parameter  |  |

|  |
| --- |
|  |

EVENTS

|  |
| --- |
| ( , ) |
| Description |  |

|  |  |
| --- | --- |
| Parameter  |  |

|  |
| --- |
|  |

## Semantics

### State behavior

#### Interface

|  |
| --- |
| **Global Variables** |
| **Type** | **Name** | **Comment** |

|  |  |  |
| --- | --- | --- |
|  |  |  |

|  |
| --- |
| **Variable Initializations** |
| **Variable** | **Value** | **Comment** |

|  |  |  |
| --- | --- | --- |
|  |  |  |

STATE MACHINE

Transitions defined in every state except states , :

|  |  |  |
| --- | --- | --- |
| **Event** | **Guard** | **Actions** |

|  |  |  |
| --- | --- | --- |
| -( , ) |  |  |

|  |
| --- |
| **Initial State**  |
| **Event** | **Guard** | **Target State** | **Actions** |

|  |  |  |  |
| --- | --- | --- | --- |
| -( , ) |  |  |  |

### Timing constraints

#### Interface

Constraint

None.

### Data constraints

#### Interface

Constraint

None.

**<DELETE THIS PAGE BEFORE FINALIZING THE DOCUMENT CREATED FROM THIS FORM>**

<This page is NOT part of the controlled document you create from this form. This section contains information on the History and Control of the form.>

# Control of the Form

|  |  |
| --- | --- |
| Approver | (approval via electronic signature in document management tool) |
| GEN: Process Owner |
| Q&R: Q&R Manager |

# History of the Form

| Revision | Doc. Date | Author | CR-ID | Description |
| --- | --- | --- | --- | --- |
| 03 | 2017 Aug 22 | Rob Albers,Benno Tonissen | 2017/112 | * Comply with new format
* Added dedicated software interface design specification sections with guidance.
 |

<List the changes and dates of approved revisions of the form/template. List three revisions maximum, with the most recent change mentioned first. Approved revisions are identified as 'NumberNumber', starting with 00. Always include the change request identification number under CR-ID. Make sure the date in the table matches the form / template date in the footer of the document.>