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Messir Analysis Document
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Contents

1	Introduction	7
1.1	Overview	7
1.2	Purpose and recipients of the document	7
1.3	Application Domain	7
1.4	Definitions, acronyms and abbreviations	7
1.5	Document structure	7
2	General Description	9
2.1	Domain Stakeholders	9
2.2	System's Actors	10
2.3	Use Cases Model	10
2.3.1	Use Cases	10
2.3.2	Use Case Instance(s)	13
3	Environment Model	15
3.1	Environment model view(s)	15
3.2	Actors and Interfaces Descriptions	15
3.2.1	actCentralCoordinator Actor	15
3.2.2	actCommunicationCompany Actor	15
3.2.3	actFiremenCoordinator Actor	16
3.2.4	actPoliceCoordinator Actor	16
3.2.5	actTowServiceCoordinator Actor	16
4	Concept Model	17
4.1	Concept Model view(s)	17
4.2	Concept Model Types Descriptions	17
4.2.1	Primary types - Class types descriptions	17
4.2.2	Primary types - Datatypes types descriptions	17
4.2.3	Primary types - Association types descriptions	18
4.2.4	Primary types - Aggregation types descriptions	18
4.2.5	Secondary types - Class types descriptions	18
4.2.6	Secondary types - Datatypes types descriptions	18
4.2.7	Secondary types - Association types descriptions	18
4.2.8	Secondary types - Aggregation types descriptions	18
4.2.9	Secondary types - Composition types descriptions	18
5	Operation Model	19
5.1	Environment - Out Interface Operation Schemes	19
5.2	Environment - Actor Operation Schemes	19
5.3	Primary Types - Operation Schemes for Classes	19

5.4	Primary Types - Operation Schemes for Datatypes	19
5.5	Primary Types - Operation Schemes for Enumerations	19
5.6	Secondary Types - Operation Schemes for Classes	19
5.7	Secondary Types - Operation Schemes for Datatypes	19
5.8	Secondary Types - Operation Schemes for Enumerations	20
6	Test Model(s)	21
7	Additional Constraints	23
A	Undocumented Messir Specification Elements	25
A.1	Undocumented Use Cases	25
A.1.1	Undocumented Use Cases - Subfunction Level	25
A.2	Undocumented Actors	25
A.3	Undocumented Primary Types	25
A.3.1	Undocumented Primary Classe Types	25
A.3.2	Undocumented Primary Datatype Types	25
A.3.3	Undocumented Primary Enumeration Types	26
A.4	Undocumented Operation Specifications	26
B	Messir Specification Files Listing	27
B.1	File /src-gen/messir-spec/.views.msr	27
B.2	File /src-gen/messir-spec/environment/environment.msr	27
B.3	File /src-gen/messir-spec/concepts.../primarytypes-associations.msr	29
B.4	File /src-gen/messir-spec/concepts/primarytypes-classes/primarytypes-classes.msr	29
B.5	File /src-gen/messir-spec/concepts.../primarytypes-datatypes.msr	29
B.6	File /src-gen/messir-spec/concepts.../secondarytypes-associations.msr	31
B.7	File /src-gen/messir-spec/concepts.../secondarytypes-classes.msr	31
B.8	File /src-gen/messir-spec/concepts.../secondarytypes-datatypes.msr	31
B.9	File /src-gen/messir-spec/tests/tests.msr	32
B.10	File /.../usecaseinstance-suGlobalManagementOfEvent-ucisuGlobalManagementOfEvent.msr	32
B.11	File /src-gen/messir-spec/usecases/usecases.msr	33

List of Figures

- 2.1 lu.uni.lassy.excalibur.group09.spec Use Case Diagram: uc-suGlobalManagementOfEvent 12
- 2.2 lu.uni.lassy.excalibur.group09.spec Sequence Diagram: uci-ucisuGlobalManagementOfEvent 14

Listings

B.1	Messir Spec. file .views.msr.	27
B.2	Messir Spec. file environment.msr.	27
B.3	Messir Spec. file primarytypes-associations.msr.	29
B.4	Messir Spec. file primarytypes-classes.msr.	29
B.5	Messir Spec. file primarytypes-datatypes.msr.	30
B.6	Messir Spec. file secondarytypes-associations.msr.	31
B.7	Messir Spec. file secondarytypes-classes.msr.	31
B.8	Messir Spec. file secondarytypes-datatypes.msr.	31
B.9	Messir Spec. file tests.msr.	32
B.10	Messir Spec. file usecaseinstance-suGlobalManagementOfEvent-ucisuGlobalManagementOfEvent.msr.	32
B.11	Messir Spec. file usecases.msr.	33

Chapter 1

Introduction

1.1 Overview

1.2 Purpose and recipients of the document

1.3 Application Domain

1.4 Definitions, acronyms and abbreviations

1.5 Document structure

Chapter 2

General Description

2.1 Domain Stakeholders

2.2 System's Actors

The objective of this section is not to provide the full requirement elicitation document in this section but to reuse a part of this document to provide a informal introduction to the **Messip** specification of the system under development. The use case model is made of a use case diagrams modelling abstractly and informally the actors and their use cases together with a set of use cases descriptions. In addition, those diagrams and description tables are adapted to the **Messip** specification since actor and messages names together with parameters are partly adapted to be consistent with the specification identifiers (see [?] for more details).

2.3 Use Cases Model

This section contains the use cases elicited during the requirements elicitation phase. The use cases are textually described as suggested by the **Messip** method and inspired by the standard Cockburn template [?].

2.3.1 Use Cases

2.3.1.1 summary-suGlobalManagementOfEvent

Shows the suGlobaManagementOfEvent use-case and its actors.

USE-CASE DESCRIPTION	
<i>Name</i>	suGlobalManagementOfEvent
<i>Scope</i>	system
<i>Level</i>	summary
Primary actor(s)	
1	actCentralCoordinator[active]
Secondary actor(s)	
1	actCommunicationCompany[active]
2	actFiremenCoordinator[active]
3	actPoliceCoordinator[active]
4	actTowServiceCoordinator[active]
Goal(s) description	
Shows the suGlobaManagementOfEvent use-case and its actors.	
Reuse	
1	<u>oeRequestCrisisEventLocation [0..*]</u>
2	<u>oeReceiveCrisisEventLocation [0..*]</u>
3	<u>oeConfirmCrisisEventLocation [1..*]</u>
4	<u>oeCreateNewCrisisEvent [1..*]</u>
5	<u>oeUpdateDispatchStatus [2..*]</u>
6	<u>oeRequestHelp [0..*]</u>
Protocol condition(s)	
1	
Pre-condition(s)	
1	
Main post-condition(s)	
1	

continues in next page ...

... Use-Case Description table continuation

Main Steps	
a	the actor <code>actCentralCoordinator</code> executes the <u><code>oeRequestCrisisEventLocation</code></u> use case
b	the actor <code>actCommunicationCompany</code> executes the <u><code>oeReceiveCrisisEventLocation</code></u> use case
c	the actor <code>actCentralCoordinator</code> executes the <u><code>oeConfirmCrisisEventLocation</code></u> use case
d	the actor <code>actCentralCoordinator</code> executes the <u><code>oeCreateNewCrisisEvent</code></u> use case
e	the actor <code>actFiremenCoordinator</code> executes the <u><code>oeUpdateDispatchStatus</code></u> use case
f	the actor <code>actTowServiceCoordinator</code> executes the <u><code>oeRefreshMap</code></u> use case
g	the actor <code>actTowServiceCoordinator</code> executes the <u><code>oeMessage</code></u> use case
h	the actor <code>actTowServiceCoordinator</code> executes the <u><code>oeUpdateDispatchStatus</code></u> use case
i	the actor <code>actFiremenCoordinator</code> executes the <u><code>oeUpdateDispatchStatus</code></u> use case
j	the actor <code>actFiremenCoordinator</code> executes the <u><code>oeRequestHelp</code></u> use case
k	the actor <code>actPoliceCoordinator</code> executes the <u><code>oeUpdateDispatchStatus</code></u> use case
l	the actor <code>actTowServiceCoordinator</code> executes the <u><code>oeUpdateDispatchStatus</code></u> use case
m	the actor <code>actPoliceCoordinator</code> executes the <u><code>oeUpdateDispatchStatus</code></u> use case
Steps Ordering Constraints	
1	if (b) then previously (a)
2	step (c) must be executed before step (d)
3	step (d) must be executed before the step (e) to (k)
Additional Information	
none	

Figure 2.1 Shows the `suGlobaManagementOfEvent` use-case and its actors.

actAbstractDispatchCoordinator

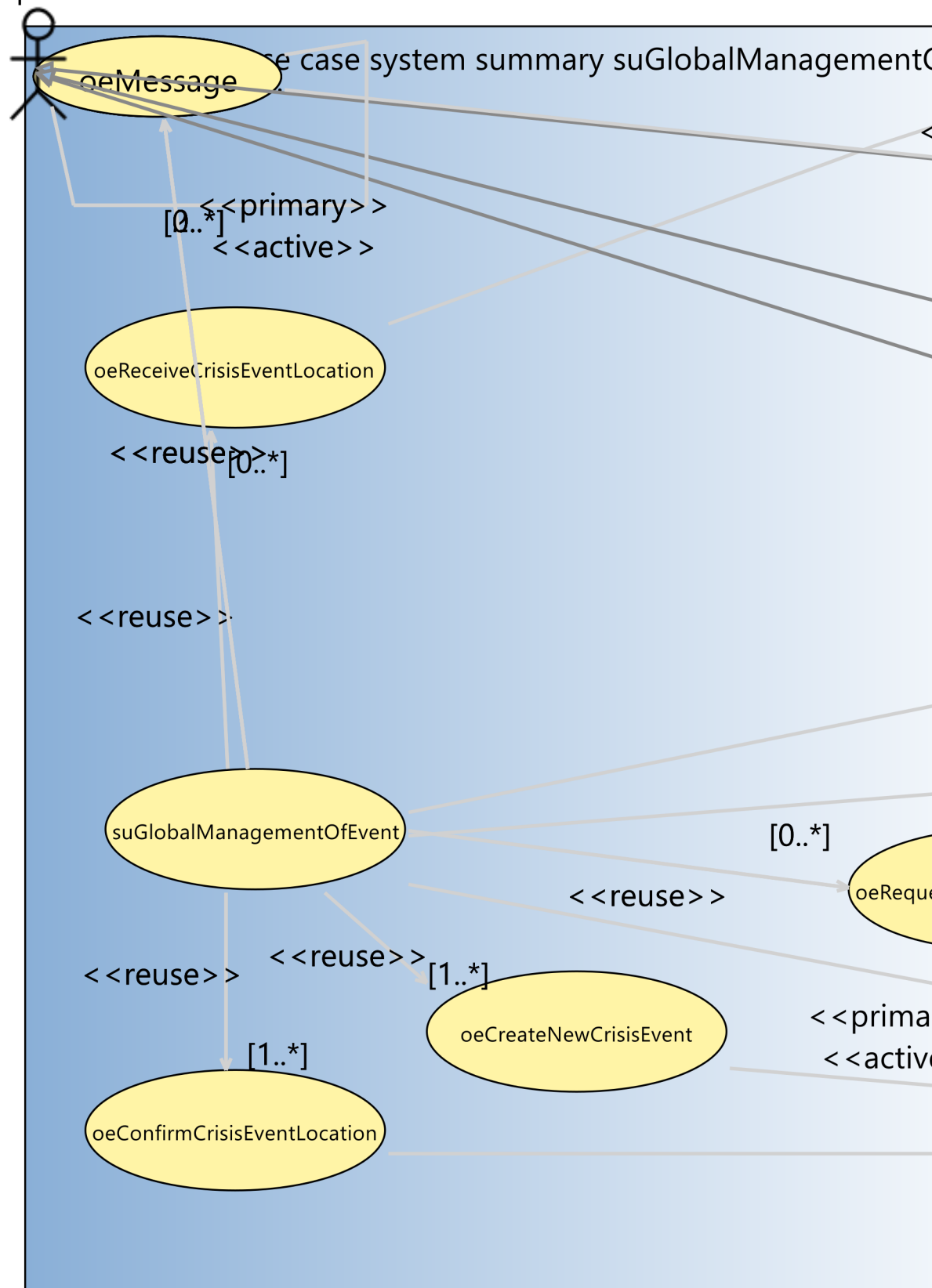


Figure 2.1:

2.3.2 Use Case Instance(s)

2.3.2.1 Use-Case Instance - ucisuGlobalManagementOfEvent:suGlobalManagementOfEvent

Shows the suGlobaManagementOfEvent instance.

SUMMARY USE-CASE INSTANCE
<i>Instantiated Use Case</i> suGlobalManagementOfEvent
<i>Instance ID</i> ucisuGlobalManagementOfEvent

Figure 2.2 Shows the suGlobaManagementOfEvent instance.



Chapter 3

Environment Model

3.1 Environment model view(s)

There are no view(s) for the **Messip** environment model.

3.2 Actors and Interfaces Descriptions

We provide for the given views the description of the actors together with their associated input and output interface descriptions.

3.2.1 **actCentralCoordinator** Actor

ACTOR	
<i>actCentralCoordinator</i>	
Is representing the person that receives the victim's or witness' call in the emergency central.	
<i>OutputInterfaces</i>	
OUT 1	oeRequestCrisisEventLocation (AdtPhoneNumber:dtPhoneNumber) :ptBoolean
OUT 2	oeMessage (AMessage:ptString) :ptBoolean
OUT 3	oeCreateNewCrisisEvent (AdtCrisisID:dtCrisisID, AdtName:ptString, AetHumanType:etHumanType, AdtPhoneNumber:dtPhoneNumber, AdtMapWithPin:dtAddress) :ptBoolean
OUT 4	oeConfirmCrisisEventLocation () :ptBoolean
<i>InputInterfaces</i>	
IN 1	ieReceiveCrisisEventLocation (AdtMapWithPin:dtMapWithPin) :ptBoolean
IN 2	ieMessage (AMessage:ptString) :ptBoolean

3.2.2 **actCommunicationCompany** Actor

ACTOR	
<i>actCommunicationCompany</i> Is representing any communication company in Luxembourg.	
<i>OutputInterfaces</i>	
OUT 1	oeReceiveCrisisEventLocation (AdtMapWithPin:dtMapWithPin) :ptBoolean
<i>InputInterfaces</i>	
IN 1	ieRequestCrisisEventLocation (AdtPhoneNumber:dtPhoneNumber) :ptBoolean

3.2.3 actFiremenCoordinator Actor

ACTOR	
<i>actFiremenCoordinator</i> Is representing any firemen team leader able to manage a two Ambulances.	
<i>Extends</i>	
lu.uni.lassy.excalibur.group09.spec.environment.actAbstractDispatchCoordinator	
<i>OutputInterfaces</i>	
OUT 1	oeRequestHelp (AetTeamType:etTeamType, ARequestedNumber:ptInteger) :ptBoolean
OUT 2	oeRefreshMap () :ptBoolean

3.2.4 actPoliceCoordinator Actor

ACTOR	
<i>actPoliceCoordinator</i> Is representing a police team leader.	
<i>Extends</i>	
lu.uni.lassy.excalibur.group09.spec.environment.actAbstractDispatchCoordinator	

3.2.5 actTowServiceCoordinator Actor

ACTOR	
<i>actTowServiceCoordinator</i> Is representing a tow service driver.	
<i>Extends</i>	
lu.uni.lassy.excalibur.group09.spec.environment.actAbstractDispatchCoordinator	

Chapter 4

Concept Model

4.1 Concept Model view(s)

There are no view(s) for the **messip** concept model.

4.2 Concept Model Types Descriptions

This section provides the textual descriptions of all the types defined in the concept model and that can be part of the graphical views provided.

4.2.1 Primary types - Class types descriptions

There are no elements in this category in the system analysed.

4.2.2 Primary types - Datatypes types descriptions

The table below is providing comments on the graphical views given for the datatype types of the primary types.

DATATYPES	
<i>dtAddress</i> A string used to identify location addresses.	
attribute	value: ptString
<i>dtCrisisID</i> An integer used to identify the crisis events.	
attribute	value: ptInteger
<i>dtMap</i> An URL used to identify a map given by Google Maps.	
attribute	value: dtURL
<i>dtMapWithPin</i> An URL including a two coordinates (real numbers) used to identify a map including a pin given by Google Maps.	

continues in next page ...

... Datatypes table continuation

attribute	map:	dtURL
attribute	pin:	dtPin
dtPin Two coordinates (X and Y being real numbers) used to identify a pin on a map.		
attribute	X:	ptReal
attribute	Y:	ptReal

4.2.3 Primary types - Association types descriptions

There are no association types for the primary types.

4.2.4 Primary types - Aggregation types descriptions

There are no aggregation types for the primary types.

4.2.4.1 Primary types - Composition types descriptions

There are no composition types for the primary types.

4.2.5 Secondary types - Class types descriptions

There are no elements in this category in the system analysed.

4.2.6 Secondary types - Datatypes types descriptions

There are no elements in this category in the system analysed.

4.2.7 Secondary types - Association types descriptions

There are no association types for the secondary types.

4.2.8 Secondary types - Aggregation types descriptions

There are no aggregation types for the secondary types.

4.2.9 Secondary types - Composition types descriptions

There are no composition types for the secondary types.

Chapter 5

Operation Model

This section contains the operation schemes of each operation defined in either an actor, its output interface, in a primary or secondary type (class, datatype or enumeration types). The **messi** OCL code listing is joined to the comment table.

5.1 Environment - Out Interface Operation Schemes

There are no elements in this category in the system analysed.

5.2 Environment - Actor Operation Schemes

There are no elements in this category in the system analysed.

5.3 Primary Types - Operation Schemes for Classes

There are no elements in this category in the system analysed.

5.4 Primary Types - Operation Schemes for Datatypes

There are no elements in this category in the system analysed.

5.5 Primary Types - Operation Schemes for Enumerations

There are no elements in this category in the system analysed.

5.6 Secondary Types - Operation Schemes for Classes

There are no elements in this category in the system analysed.

5.7 Secondary Types - Operation Schemes for Datatypes

There are no elements in this category in the system analysed.

5.8 Secondary Types - Operation Schemes for Enumerations

There are no elements in this category in the system analysed.

Chapter 6

Test Model(s)

There are no elements in this category in the system analysed.

Chapter 7

Additional Constraints

Appendix A

Undocumented Messir Specification Elements

A.1 Undocumented Use Cases

A.1.1 Undocumented Subfunction Level Use Cases

- lu.uni.lassy.excalibur.group09.spec.usecases.oeConfirmCrisisEventLocation
- lu.uni.lassy.excalibur.group09.spec.usecases.oeCreateNewCrisisEvent
- lu.uni.lassy.excalibur.group09.spec.usecases.oeMessage
- lu.uni.lassy.excalibur.group09.spec.usecases.oeRefreshMap
- lu.uni.lassy.excalibur.group09.spec.usecases.oeRequestCrisisEventLocation
- lu.uni.lassy.excalibur.group09.spec.usecases.oeRequestHelp
- lu.uni.lassy.excalibur.group09.spec.usecases.oeReceiveCrisisEventLocation
- lu.uni.lassy.excalibur.group09.spec.usecases.oeUpdateDispatchStatus

A.2 Undocumented Actors

- lu.uni.lassy.excalibur.group09.spec.environment.actAbstractDispatchCoordinator

A.3 Undocumented Primary Types

A.3.1 Undocumented Primary Classe Types

- lu.uni.lassy.excalibur.group09.spec.concepts.primarytypes.classes.ctState

A.3.2 Undocumented Primary Datatype Types

- lu.uni.lassy.excalibur.group09.spec.concepts.primarytypes.datatypes.dtPhoneNumber
- lu.uni.lassy.excalibur.group09.spec.concepts.primarytypes.datatypes.dtURL

A.3.3 Undocumented Primary Enumeration Types

- lu.uni.lassy.excalibur.group09.spec.concepts.primarytypes.datatypes.etDispatchStatus
- lu.uni.lassy.excalibur.group09.spec.concepts.primarytypes.datatypes.etHumanType
- lu.uni.lassy.excalibur.group09.spec.concepts.primarytypes.datatypes.etTeamType

A.4 Undocumented Operation Specifications

- lu.uni.lassy.excalibur.group09.spec.concepts.primarytypes.datatypes.dtAddress.is
- lu.uni.lassy.excalibur.group09.spec.concepts.primarytypes.datatypes.dtCrisisID.is
- lu.uni.lassy.excalibur.group09.spec.concepts.primarytypes.datatypes.dtMap.is
- lu.uni.lassy.excalibur.group09.spec.concepts.primarytypes.datatypes.dtMapWithPin.is
- lu.uni.lassy.excalibur.group09.spec.concepts.primarytypes.datatypes.dtPhoneNumber.is
- lu.uni.lassy.excalibur.group09.spec.concepts.primarytypes.datatypes.dtPin.is
- lu.uni.lassy.excalibur.group09.spec.concepts.primarytypes.datatypes.dtURL.is
- lu.uni.lassy.excalibur.group09.spec.concepts.primarytypes.datatypes.etDispatchStatus.is
- lu.uni.lassy.excalibur.group09.spec.concepts.primarytypes.datatypes.etHumanType.is
- lu.uni.lassy.excalibur.group09.spec.concepts.primarytypes.datatypes.etTeamType.is
- lu.uni.lassy.excalibur.group09.spec.environment.actAbstractDispatchCoordinator.outactAbstractDispatchCoordinator
- lu.uni.lassy.excalibur.group09.spec.environment.actAbstractDispatchCoordinator.outactAbstractDispatchCoordinator
- lu.uni.lassy.excalibur.group09.spec.environment.actAbstractDispatchCoordinator.outactAbstractDispatchCoordinator
- lu.uni.lassy.excalibur.group09.spec.environment.actCommunicationCompany.outactCommunicationCompany
- lu.uni.lassy.excalibur.group09.spec.environment.actCentralCoordinator.outactCentralCoordinator.oeConfirm
- lu.uni.lassy.excalibur.group09.spec.environment.actCentralCoordinator.outactCentralCoordinator.oeCreate
- lu.uni.lassy.excalibur.group09.spec.environment.actCentralCoordinator.outactCentralCoordinator.oeMessage
- lu.uni.lassy.excalibur.group09.spec.environment.actCentralCoordinator.outactCentralCoordinator.oeRequest
- lu.uni.lassy.excalibur.group09.spec.environment.actFiremenCoordinator.outactFiremenCoordinator.oeRefresh
- lu.uni.lassy.excalibur.group09.spec.environment.actFiremenCoordinator.outactFiremenCoordinator.oeRequest

Appendix B

Messir Specification Files Listing

B.1 File ./src-gen/messir-spec/.views.msr

```
1 //
2 //DON'T TOUCH THIS FILE !!!
3 //
4 package uuidff8a216549a64951bf055c8b5a9dde2a {
5   Concept Model {}
6 }
```

Listing B.1: Messir Spec. file .views.msr.

B.2 File ./src-gen/messir-spec/environment/environment.msr

```
1 /*
2 * @author Kira
3 * @date Tue Oct 25 23:54:03 CEST 2016
4 */
5
6 package lu.uni.lassy.excalibur.group09.spec.environment {
7
8   import lu.uni.lassy.messir.libraries.calendar
9   import lu.uni.lassy.messir.libraries.math
10  import lu.uni.lassy.messir.libraries.primitives
11  import lu.uni.lassy.messir.libraries.string
12
13  import lu.uni.lassy.excalibur.group09.spec.concepts.primarytypes.datatypes
14
15  Environment Model {
16
17    actor actCentralCoordinator role rnactCentralCoordinator cardinality [1..*] {
18
19      operation init():ptBoolean
20
21      input interface inactCentralCoordinator {
22        operation ieReceiveCrisisEventLocation(AdtMapWithPin:dtMapWithPin) : ptBoolean
23        operation ieConfirmCrisisEventLocation(AdMessage:ptString) : ptBoolean
24        operation ieMessage(AMessage:ptString) : ptBoolean
25      }
26
27      output interface outactCentralCoordinator {
28        operation oeRequestCrisisEventLocation(AdtPhoneNumber:dtPhoneNumber) : ptBoolean
29        operation oeMessage(AMessage:ptString) : ptBoolean
30        operation oeCreateNewCrisisEvent(AdtCrisisID:dtCrisisID, AdtName:ptString, AetHumanType:
          etHumanType, AdtPhoneNumber:dtPhoneNumber, AdtMapWithPin:dtAddress) : ptBoolean
31        operation oeConfirmCrisisEventLocation() : ptBoolean
32      }
33    }
34
35    actor actCommunicationCompany role rnactCommunicationCompany cardinality [1..*] {
```

```

36
37   operation init() : ptBoolean
38
39   input interface inactCommunicationCompany {
40       operation ieRequestCrisisEventLocation(AdtPhoneNumber:dtPhoneNumber) : ptBoolean
41   }
42
43   output interface outactCommunicationCompany {
44       operation oeReceiveCrisisEventLocation(AdtMapWithPin:dtMapWithPin) : ptBoolean
45   }
46 }
47
48 actor actAbstractDispatchCoordinator role ractAbstractDispatchCoordinator cardinality [1..*] {
49
50     operation init() : ptBoolean
51
52     input interface inactAbstractDispatchCoordinator {
53         operation ieReceiveNewCrisisEvent(AdtCrisisID:dtCrisisID, AdtName:ptString, AetHumanType:
54             etHumanType, AdtPhoneNumber:dtPhoneNumber, AdtMapWithPin:dtAddress) : ptBoolean
55         operation ieMessage(AMessage: ptString) : ptBoolean
56         operation ieReceiveMap(AdtMapWithPin: dtMapWithPin) : ptBoolean
57     }
58
59     output interface outactAbstractDispatchCoordinator {
60         operation oeMessage(AMessage:ptString) : ptBoolean
61         operation oeUpdateDispatchStatus(AetDispatchStatus:etDispatchStatus): ptBoolean
62         operation oeRefreshMap(AdtCrisisID:dtCrisisID) : ptBoolean
63     }
64 }
65 actor actFiremenCoordinator role ractFiremenCoordinator cardinality [1..*] extends
66     actAbstractDispatchCoordinator {
67
68     operation init() : ptBoolean
69
70     input interface inactFiremenCoordinator {
71     }
72
73     output interface outactFiremenCoordinator {
74         operation oeRequestHelp(AetTeamType: etTeamType, ARequestedNumber:ptInteger) : ptBoolean
75         operation oeRefreshMap() : ptBoolean
76     }
77 }
78 actor actPoliceCoordinator role rnPoliceCoordinator cardinality [1..*] extends
79     actAbstractDispatchCoordinator {
80
81     operation init() : ptBoolean
82
83     input interface inactPoliceCoordinator {
84     }
85
86     output interface outactPoliceCoordinator {
87     }
88 }
89 actor actTowServiceCoordinator role rnTowServiceCoordinator cardinality [1..*] extends
90     actAbstractDispatchCoordinator {
91
92     operation init() : ptBoolean
93
94     input interface inactTowServiceCoordinator {
95     }
96
97     output interface outactTowServiceCoordinator {
98     }
99 }
100 }

```

101 }

Listing B.2: Messir Spec. file environment.msr.

B.3 File `./src-gen/messir-spec/concepts/primarytypes-associations/primarytypes-associations.msr`

```

1 /*
2 * @author Kira
3 * @date Tue Oct 25 23:54:03 CEST 2016
4 */
5
6 package lu.uni.lassy.excalibur.group09.spec.concepts.primarytypes.associations {
7
8 import lu.uni.lassy.messir.libraries.calendar
9 import lu.uni.lassy.messir.libraries.math
10 import lu.uni.lassy.messir.libraries.primitives
11 import lu.uni.lassy.messir.libraries.string
12
13 Concept Model {
14
15 Primary Types {
16
17 }
18 }
19 }

```

Listing B.3: Messir Spec. file primarytypes-associations.msr.

B.4 File `./src-gen/messir-spec/concepts/primarytypes-classes/primarytypes-classes.msr`

```

1 /*
2 * @author Kira
3 * @date Tue Oct 25 23:54:03 CEST 2016
4 */
5
6 package lu.uni.lassy.excalibur.group09.spec.concepts.primarytypes.classes {
7
8 import lu.uni.lassy.messir.libraries.calendar
9 import lu.uni.lassy.messir.libraries.math
10 import lu.uni.lassy.messir.libraries.primitives
11 import lu.uni.lassy.messir.libraries.string
12
13 import lu.uni.lassy.messir.libraries.primitives
14
15 Concept Model {
16
17 Primary Types {
18
19 state class ctState {
20 attribute vpStarted: ptBoolean
21
22 operation init(AvpStarted:ptBoolean): ptBoolean
23 }
24
25 }
26 }
27 }

```

Listing B.4: Messir Spec. file primarytypes-classes.msr.

B.5 File `./src-gen/messir-spec/concepts/primarytypes-datatypes/primarytypes-datatypes.msr`

```

1 /*
2 * @author Kira
3 * @date Tue Oct 25 23:54:03 CEST 2016
4 */
5
6 package lu.uni.lassy.excalibur.group09.spec.concepts.primarytypes.datatypes {
7
8 import lu.uni.lassy.messir.libraries.calendar
9 import lu.uni.lassy.messir.libraries.math
10 import lu.uni.lassy.messir.libraries.primitives
11 import lu.uni.lassy.messir.libraries.string
12
13 Concept Model {
14
15 Primary Types {
16     datatype dtPhoneNumber {
17         attribute value : ptInteger
18         operation is() : ptBoolean
19     }
20
21     datatype dtAddress {
22         attribute value : ptString
23         operation is() : ptBoolean
24     }
25
26     datatype dtCrisisID {
27         attribute value : ptInteger
28         operation is() : ptBoolean
29     }
30
31     datatype dtURL {
32         attribute value : ptString
33         operation is() : ptBoolean
34     }
35
36     datatype dtMap{
37         attribute value : dtURL
38         operation is() : ptBoolean
39     }
40
41     datatype dtPin {
42         attribute X : ptReal
43         attribute Y : ptReal
44         operation is() : ptBoolean
45     }
46
47     datatype dtMapWithPin{
48         attribute map : dtURL
49         attribute pin : dtPin
50         operation is() : ptBoolean
51     }
52
53     enum etDispatchStatus {
54         constants["InStation", "InTransit", "Arrived"]
55         operation is() : ptBoolean
56     }
57
58     enum etHumanType {
59         constants["Victim", "Witness"]
60         operation is() : ptBoolean
61     }
62
63     enum etTeamType {
64         constants["AmbulanceTeam", "PoliceTeam", "TowServiceTeam"]
65         operation is() : ptBoolean
66     }
67 }
68 }

```

69 }

Listing B.5: Messir Spec. file primarytypes-datatypes.msr.

B.6 File `./src-gen/messir-spec/concepts/secondarytypes-associations/secondarytypes-associations.msr`

```

1 /*
2 * @author Kira
3 * @date Tue Oct 25 23:54:03 CEST 2016
4 */
5
6 package lu.uni.lassy.excalibur.group09.spec.concepts.secondarytypes.associations {
7
8 import lu.uni.lassy.messir.libraries.calendar
9 import lu.uni.lassy.messir.libraries.math
10 import lu.uni.lassy.messir.libraries.primitives
11 import lu.uni.lassy.messir.libraries.string
12
13 Concept Model {
14
15 Secondary Types {
16
17 }
18 }
19 }
```

Listing B.6: Messir Spec. file secondarytypes-associations.msr.

B.7 File `./src-gen/messir-spec/concepts/secondarytypes-classes/secondarytypes-classes.msr`

```

1 /*
2 * @author Kira
3 * @date Tue Oct 25 23:54:03 CEST 2016
4 */
5
6 package lu.uni.lassy.excalibur.group09.spec.concepts.secondarytypes.classes {
7
8 import lu.uni.lassy.messir.libraries.calendar
9 import lu.uni.lassy.messir.libraries.math
10 import lu.uni.lassy.messir.libraries.primitives
11 import lu.uni.lassy.messir.libraries.string
12
13 Concept Model {
14
15 Secondary Types {
16
17 }
18 }
19 }
```

Listing B.7: Messir Spec. file secondarytypes-classes.msr.

B.8 File `./src-gen/messir-spec/concepts/secondarytypes-datatypes/secondarytypes-datatypes.msr`

```

1 /*
2 * @author Kira
3 * @date Tue Oct 25 23:54:03 CEST 2016
4 */
5
6 package lu.uni.lassy.excalibur.group09.spec.concepts.secondarytypes.datatypes {
```

```

7
8 import lu.uni.lassy.messir.libraries.calendar
9 import lu.uni.lassy.messir.libraries.math
10 import lu.uni.lassy.messir.libraries.primitives
11 import lu.uni.lassy.messir.libraries.string
12
13 Concept Model {
14
15   Secondary Types {
16
17   }
18
19 }
20 }

```

Listing B.8: Messir Spec. file secondarytypes-datatypes.msr.

B.9 File ./src-gen/messir-spec/tests/tests.msr

```

1 /*
2 * @author Kira
3 * @date Tue Oct 25 23:54:03 CEST 2016
4 */
5
6 package lu.uni.lassy.excalibur.group09.spec.tests {
7
8   import lu.uni.lassy.messir.libraries.calendar
9   import lu.uni.lassy.messir.libraries.math
10  import lu.uni.lassy.messir.libraries.primitives
11  import lu.uni.lassy.messir.libraries.string
12
13  Test Model {
14
15  }
16
17 }

```

Listing B.9: Messir Spec. file tests.msr.

B.10 File ./src-gen/messir-spec/usecases/usecaseinstance-suGlobalManagementOfEvent-ucisuGlobalManagementOfEvent.msr

```

1 package usecases.ucisuGlobalManagementOfEvent {
2   import lu.uni.lassy.excalibur.group09.spec.usecases
3   import lu.uni.lassy.excalibur.group09.spec.environment
4   import lu.uni.lassy.excalibur.group09.spec.concepts.primarytypes.datatypes
5
6   Use Case Model {
7
8     use case instance ucisuGlobalManagementOfEvent : suGlobalManagementOfEvent{
9       actors {
10         Camille : actCentralCoordinator
11         Orange : actCommunicationCompany
12         Fabio : actFiremenCoordinator
13         Ted : actTowServiceCoordinator
14         Polo : actPoliceCoordinator
15       }
16
17       use case steps {
18
19         Camille executed instance of subfunction oeRequestCrisisEventLocation("AdtPhoneNumber=691123456")
20         {
21           ieRequestCrisisEventLocation("691123456") returned to Orange
22         }
23
24         Orange executed instance of subfunction oeReceiveCrisisEventLocation("AdtMapWithPin=http://..., X
25           =75.08, Y=23.03") {

```



```

24     ieReceiveCrisisEventLocation("http://...", X=75.08, Y=23.03") returned to Camille
25 }
26
27 Camille executed instance of subfunction oeConfirmCrisisEventLocation() {
28     ieConfirmCrisisEventLocation("Done") returned to Camille
29 }
30
31 Camille executed instance of subfunction oeCreateNewCrisisEvent("AdtCrisisID=1", "AdtName=Walter"
    , "AenHumanType=Witness", "AdtPhoneNumberX=691123456", "AdtMapWithPin=http://...", X=75.08, Y
    =23.03", "No additional comments") {
32     ieReceiveNewCrisisEvent("1", "Walter", "Witness", "691123456", "http://...", X=75.08, Y=23.03", "No
        additional comments") returned to Fabio
33     ieReceiveNewCrisisEvent("1", "Walter", "Witness", "691123456", "http://...", X=75.08, Y=23.03", "No
        additional comments") returned to Ted
34 }
35
36 Fabio executed instance of subfunction oeUpdateDispatchStatus(AenDispatchStatus="InTransit") {
37     ieMessage("Dispatch Status Updated.") returned to Fabio
38 }
39
40 Ted executed instance of subfunction oeRefreshMap("AdtCrisisID=1") {
41     ieReceiveMap("http://...", X=75.08, Y=23.03") returned to Ted
42 }
43
44 Ted executed instance of subfunction oeMessage("AMessage=I will arrive in 30 minutes") {
45     ieMessage("I will arrive in 30 minutes") returned to Camille
46     ieMessage("I will arrive in 30 minutes") returned to Fabio
47     ieMessage("I will arrive in 30 minutes") returned to Ted
48 }
49
50 Ted executed instance of subfunction oeUpdateDispatchStatus(AenDispatchStatusX="InTransit") {
51     ieMessage("Dispatch Status Updated.") returned to Ted
52 }
53
54 Fabio executed instance of subfunction oeUpdateDispatchStatus(AenDispatchStatusXX="Arrived") {
55     ieMessage("Dispatch Status Updated.") returned to Fabio
56 }
57
58 Fabio executed instance of subfunction oeRequestHelp(AenTeamType="Police", RequestedNumber="1") {
59     ieReceiveNewCrisisEvent("1", "Walter", "Witness", "691123456", "http://...", X=75.08, Y=23.03")
        returned to Polo
60 }
61
62 Polo executed instance of subfunction oeUpdateDispatchStatus(AenDispatchStatusXXX="InTransit") {
63     ieMessage("Dispatch Status Updated.") returned to Polo
64 }
65
66 Ted executed instance of subfunction oeUpdateDispatchStatus(AenDispatchStatusXXXX="Arrived") {
67     ieMessage("Dispatch Status Updated.") returned to Ted
68 }
69
70 Polo executed instance of subfunction oeUpdateDispatchStatus(AenDispatchStatusXXXXX="Arrived") {
71     ieMessage("Dispatch Status Updated.") returned to Polo
72 }
73
74 }
75 }
76 }
77 }

```

Listing B.10: Messir Spec. file
 usecaseinstance-suGlobalManagementOfEvent-ucisuGlobalManagementOfEvent.msr.

B.11 File ./src-gen/messir-spec/usecases/usecases.msr

```

1 /*
2 * @author Kira
3 * @date Tue Oct 25 23:54:03 CEST 2016
4 */

```

```

5
6 package lu.uni.lassy.excalibur.group09.spec.usecases {
7
8 import lu.uni.lassy.messir.libraries.calendar
9 import lu.uni.lassy.messir.libraries.math
10 import lu.uni.lassy.messir.libraries.primitives
11 import lu.uni.lassy.messir.libraries.string
12 import lu.uni.lassy.excalibur.group09.spec.environment
13 import lu.uni.lassy.excalibur.group09.spec.concepts.primarytypes.datatypes
14
15 Use Case Model {
16
17 use case system summary suGlobalManagementOfEvent() {
18     actor actCentralCoordinator[primary, active]
19     actor actCommunicationCompany[secondary, active]
20     actor actFiremenCoordinator[secondary, active]
21     actor actPoliceCoordinator[secondary, active]
22     actor actTowServiceCoordinator[secondary, active]
23
24     reuse oeRequestCrisisEventLocation[0..*]
25     reuse oeReceiveCrisisEventLocation[0..*]
26     reuse oeConfirmCrisisEventLocation[1..*]
27     reuse oeCreateNewCrisisEvent[1..*]
28     reuse oeUpdateDispatchStatus[2..*]
29     reuse oeRequestHelp[0..*]
30
31     step a: actCentralCoordinator executes oeRequestCrisisEventLocation
32     step b: actCommunicationCompany executes oeReceiveCrisisEventLocation
33     step c: actCentralCoordinator executes oeConfirmCrisisEventLocation
34     step d: actCentralCoordinator executes oeCreateNewCrisisEvent
35     step e: actFiremenCoordinator executes oeUpdateDispatchStatus
36     step f: actTowServiceCoordinator executes oeRefreshMap
37     step g: actTowServiceCoordinator executes oeMessage
38     step h: actTowServiceCoordinator executes oeUpdateDispatchStatus
39     step i: actFiremenCoordinator executes oeUpdateDispatchStatus
40     step j: actFiremenCoordinator executes oeRequestHelp
41     step k: actPoliceCoordinator executes oeUpdateDispatchStatus
42     step l: actTowServiceCoordinator executes oeUpdateDispatchStatus
43     step m: actPoliceCoordinator executes oeUpdateDispatchStatus
44
45     ordering constraint "if (b) then previously (a)"
46     ordering constraint "step (c) must be executed before step (d)"
47     ordering constraint "step (d) must be executed before the step (e) to (k)"
48 }
49
50 use case system subfunction oeRequestCrisisEventLocation(AdtPhoneNumber:dtPhoneNumber) {
51     actor actCentralCoordinator[primary, active]
52     actor actCommunicationCompany[secondary, passive]
53     returned messages{
54         ieRequestCrisisEventLocation(AdtPhoneNumber) returned to actCommunicationCompany //Slide 208..
55     }
56 }
57
58 use case system subfunction oeReceiveCrisisEventLocation(AdtMapWithPin:dtMapWithPin) {
59     actor actCommunicationCompany[primary, active]
60     actor actCentralCoordinator[secondary, passive]
61     returned messages{
62         ieReceiveCrisisEventLocation(AdtMapWithPin) returned to actCentralCoordinator
63     }
64 }
65
66 use case system subfunction oeConfirmCrisisEventLocation() {
67     actor actCentralCoordinator[primary, active]
68     returned messages{
69         ieConfirmCrisisEventLocation() returned to actCentralCoordinator
70     }
71 }
72
73 use case system subfunction oeCreateNewCrisisEvent(AdtCrisisID:dtCrisisID, AdtName:ptString,
    AetHumanType:etHumanType, AdtPhoneNumber:dtPhoneNumber, AdtMapWithPin:dtMapWithPin, AMessage:

```

```

    ptString) {
74  actor actCentralCoordinator[primary,active]
75  actor actAbstractDispatchCoordinator[secondary,passive]
76  returned messages{
77    ieReceiveNewCrisisEvent(AdtCrisisID, AdtName, AetHumanType, AdtPhoneNumber, AdtMapWithPin,
      AMessage) returned to actAbstractDispatchCoordinator
78 //    ieReceiveNewCrisisEvent(AdtCrisisID, AdtName, AetHumanType, AdtPhoneNumber, AdtMapWithPin)
      returned to actFiremenCoordinator
79 //    ieReceiveNewCrisisEvent(AdtCrisisID, AdtName, AetHumanType, AdtPhoneNumber, AdtMapWithPin)
      returned to actTowServiceCoordinator
80  }
81  }
82
83  use case system subfunction oeMessage(AMessage:ptString) {
84    actor actAbstractDispatchCoordinator[primary,active]
85    actor actCentralCoordinator[secondary, passive]
86    actor actAbstractDispatchCoordinator[secondary, multiple]
87    returned messages{
88      ieMessage(AMessage) returned to actAbstractDispatchCoordinator
89 //      ieMessage(AMessage) returned to actCentralCoordinator //PROBLEME DE IE DEUX FOIS
      SANS SOUS-TYPAGE
90    }
91  }
92
93  use case system subfunction oeUpdateDispatchStatus(AetDispatchStatus:etDispatchStatus){
94    actor actAbstractDispatchCoordinator[primary,active]
95 //    actor actFiremenCoordinator[primary,active]
96 //    actor actPoliceCoordinator[primary,active]
97 //    actor actTowServiceCoordinator[primary,active]
98    returned messages{
99      ieMessage(AMessage) returned to actAbstractDispatchCoordinator
100  }
101  }
102
103  use case system subfunction oeRefreshMap(AdtCrisisID:dtCrisisID){
104    actor actAbstractDispatchCoordinator[primary,active]
105 //    actor actFiremenCoordinator[primary,active]
106 //    actor actPoliceCoordinator[primary,active]
107 //    actor actTowServiceCoordinator[primary,active]
108    returned messages{
109      ieReceiveMap(AdtMapWithPin) returned to actAbstractDispatchCoordinator
110    }
111  }
112
113  use case system subfunction oeRequestHelp(AetTeamType: etTeamType, RequestedNumber:ptInteger) {
114    actor actFiremenCoordinator[primary,active]
115    actor actAbstractDispatchCoordinator[secondary,passive]
116 //    actor actPoliceCoordinator[secondary,passive]
117 //    actor actTowServiceCoordinator[secondary,passive]
118
119    returned messages{
120      ieReceiveNewCrisisEvent(AdtCrisisID, AdtName, AetHumanType, AdtPhoneNumber, AdtMapWithPin,
        AMessage) returned to actAbstractDispatchCoordinator
121 //      ieReceiveNewCrisisEvent(AdtCrisisID, AdtName, AetHumanType, AdtPhoneNumber, AdtMapWithPin)
        returned to actFiremenCoordinator
122 //      ieReceiveNewCrisisEvent(AdtCrisisID, AdtName, AetHumanType, AdtPhoneNumber, AdtMapWithPin)
        returned to actTowServiceCoordinator
123 //      ieReceiveNewCrisisEvent(AdtCrisisID, AdtName, AetHumanType, AdtPhoneNumber, AdtMapWithPin)
        returned to actTowPoliceCoordinator
124    }
125  }
126
127  }
128
129  }

```

Listing B.11: Messir Spec. file usecases.msr.

