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MyProjectName : Your Title
Messir Analysis Document
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(*Report type: Default*)

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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)	14
3	Environment Model	23
3.1	Environment model view(s)	23
3.2	Actors and Interfaces Descriptions	23
3.2.1	actCoordinator Actor	23
3.2.2	actMainDatabase Actor	24
3.2.3	actPhoneCompany Actor	25
3.2.4	actPositionInputActor Actor	25
3.2.5	actPositionRequester Actor	25
3.2.6	actSensor Actor	26
3.2.7	actVolunteer Actor	26
3.2.8	actWeakPerson Actor	27
3.2.9	actWeakPersonFamily Actor	27
4	Concept Model	29
4.1	Concept Model view(s)	29
4.2	Concept Model Types Descriptions	29
4.2.1	Primary types - Class types descriptions	29
4.2.2	Primary types - Datatypes types descriptions	29
4.2.3	Primary types - Association types descriptions	29
4.2.4	Primary types - Aggregation types descriptions	29
4.2.5	Secondary types - Class types descriptions	29
4.2.6	Secondary types - Datatypes types descriptions	29
4.2.7	Secondary types - Association types descriptions	30
4.2.8	Secondary types - Aggregation types descriptions	30
4.2.9	Secondary types - Composition types descriptions	30

5	Operation Model	31
5.1	Environment - Out Interface Operation Schemes	31
5.2	Environment - Actor Operation Schemes	31
5.3	Primary Types - Operation Schemes for Classes	31
5.4	Primary Types - Operation Schemes for Datatypes	31
5.5	Primary Types - Operation Schemes for Enumerations	31
5.6	Secondary Types - Operation Schemes for Classes	31
5.7	Secondary Types - Operation Schemes for Datatypes	31
5.8	Secondary Types - Operation Schemes for Enumerations	32
6	Test Model(s)	33
7	Additional Constraints	35
A	Undocumented Messir Specification Elements	37
A.1	Undocumented Use Cases	37
A.1.1	Undocumented Use Cases - Summary Level	37
A.1.2	Undocumented Use Cases - User-Goal Level	37
A.1.3	Undocumented Use Cases - Subfunction Level	37
A.2	Undocumented Use Case Instances	38
A.2.1	Undocumented Use Case Instances - Summary Level	38
A.2.2	Undocumented Use Case Instances - User-Goal Level	38
A.3	Undocumented Actors	38
A.4	Undocumented Primary Types	38
A.4.1	Undocumented Primary Classe Types	38
A.4.2	Undocumented Primary Datatype Types	38
A.5	Undocumented Secondary Types	39
A.5.1	Undocumented Secondary Datatype Types	39
A.6	Undocumented Operation Specifications	39
B	Messir Specification Files Listing	41
B.1	File /src-gen/messir-spec/.views.msr	41
B.2	File /src-gen/messir-spec/environment/environment.msr	41
B.3	File /src-gen/messir-spec/concepts.../primarytypes-associations.msr	44
B.4	File /src-gen/messir-spec/concepts/primarytypes-classes/primarytypes-classes.msr	44
B.5	File /src-gen/messir-spec/concepts.../primarytypes-datatypes.msr	44
B.6	File /src-gen/messir-spec/concepts.../secondarytypes-associations.msr	45
B.7	File /src-gen/messir-spec/concepts.../secondarytypes-classes.msr	46
B.8	File /src-gen/messir-spec/concepts.../secondarytypes-datatypes.msr	46
B.9	File /src-gen/messir-spec/tests/tests.msr	47
B.10	File /src-gen/messir-spec/concepts/uc _c ordinator.msr	47
B.11	File /src-gen/messir-spec/concepts/uc _v olunteer.msr	49
B.12	File /.../usecaseinstance-suAlertAFamilyMember-ucisuAlertAFamilyMember.msr	50
B.13	File /src-gen/messir-spec/usecases/usecases.msr	51

List of Figures

2.1	lu.uni.lassy.excalibur.g01.specification	Use Case Diagram: uc-suAlertAFamilyMember . .	11
2.2	lu.uni.lassy.excalibur.g01.specification	Use Case Diagram: uc-ugRequestHelp	12
2.3	lu.uni.lassy.excalibur.g01.specification	Use Case Diagram: uc-ugGetMissionInRange . .	13
2.4	lu.uni.lassy.excalibur.g01.specification	Use Case Diagram: uc-oeAlertFamily	13
2.5	lu.uni.lassy.excalibur.g01.specification	Use Case Diagram: uc-oeGetDeliveryReport . .	14
2.6	lu.uni.lassy.excalibur.g01.specification	Use Case Diagram: uc-oeGetPositionFromSensor	15
2.7	lu.uni.lassy.excalibur.g01.specification	Use Case Diagram: uc-oeSendFamilyDetails . .	16
2.8	lu.uni.lassy.excalibur.g01.specification	Sequence Diagram: uci-ucisuAlertAFamilyMember	17
2.9	lu.uni.lassy.excalibur.g01.specification	Sequence Diagram: uci-uciCallSelectedHelp . . .	18
2.10	lu.uni.lassy.excalibur.g01.specification	Sequence Diagram: uci-uciSendHelpRequest . .	19
2.11	lu.uni.lassy.excalibur.g01.specification	Sequence Diagram: uci-uciGetInRangeMission .	20
2.12	lu.uni.lassy.excalibur.g01.specification	Sequence Diagram: uci-uciGetPendingHelpRequests	21

Listings

B.1	Messir Spec. file <code>.views.msr</code>	41
B.2	Messir Spec. file <code>environment.msr</code>	41
B.3	Messir Spec. file <code>primarytypes-associations.msr</code>	44
B.4	Messir Spec. file <code>primarytypes-classes.msr</code>	44
B.5	Messir Spec. file <code>primarytypes-datatypes.msr</code>	45
B.6	Messir Spec. file <code>secondarytypes-associations.msr</code>	45
B.7	Messir Spec. file <code>secondarytypes-classes.msr</code>	46
B.8	Messir Spec. file <code>secondarytypes-datatypes.msr</code>	46
B.9	Messir Spec. file <code>tests.msr</code>	47
B.10	Messir Spec. file <code>uc_coordinator.msr</code>	47
B.11	Messir Spec. file <code>uc_volunteer.msr</code>	50
B.12	Messir Spec. file <code>usecaseinstance-suAlertAFamilyMember-ucisuAlertAFamilyMember.msr</code>	50
B.13	Messir Spec. file <code>usecases.msr</code>	51

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 Cokburn template [?].

2.3.1 Use Cases

2.3.1.1 summary-suAlertAFamilyMember

Figure 2.1 Summary Alert a family member

2.3.1.2 summary-ugRequestHelp

Figure 2.2 User goal Request help

2.3.1.3 usergoal-ugGetMissionInRange

Figure 2.3 User goal Get mission in range

2.3.1.4 subfunction-oeAlertFamily

Figure 2.4 Sub Function AlertFamily

2.3.1.5 subfunction-oeGetDeliveryReport

Figure 2.5 Sub Function Get delivery report

2.3.1.6 subfunction-oeGetPositionFromSensor

Figure 2.6 Sub Function Get position from sensor

2.3.1.7 subfunction-oeSendFamilyDetails

Figure 2.7 Sub function Send family details

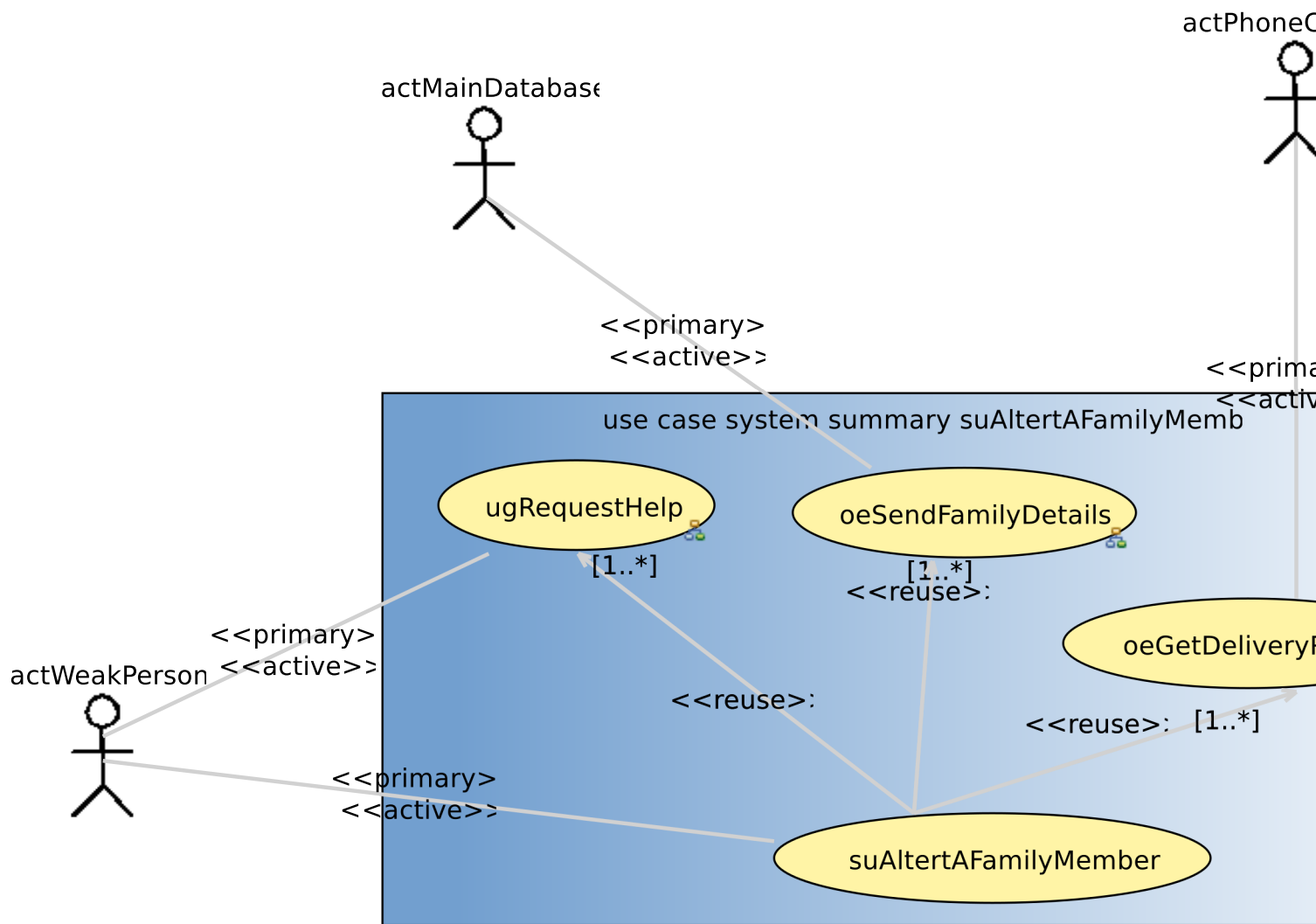


Figure 2.1:

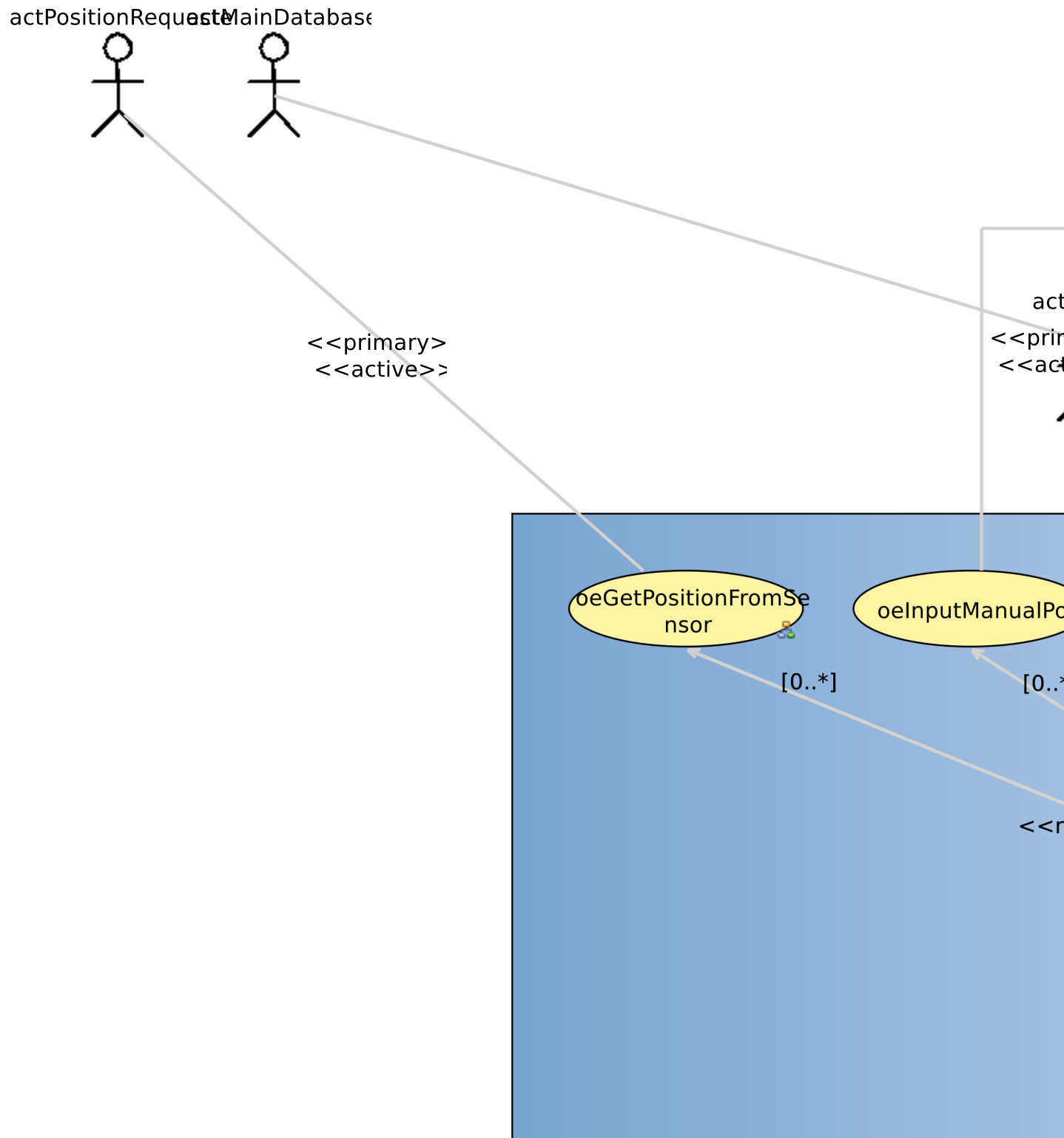


Figure 2.2:

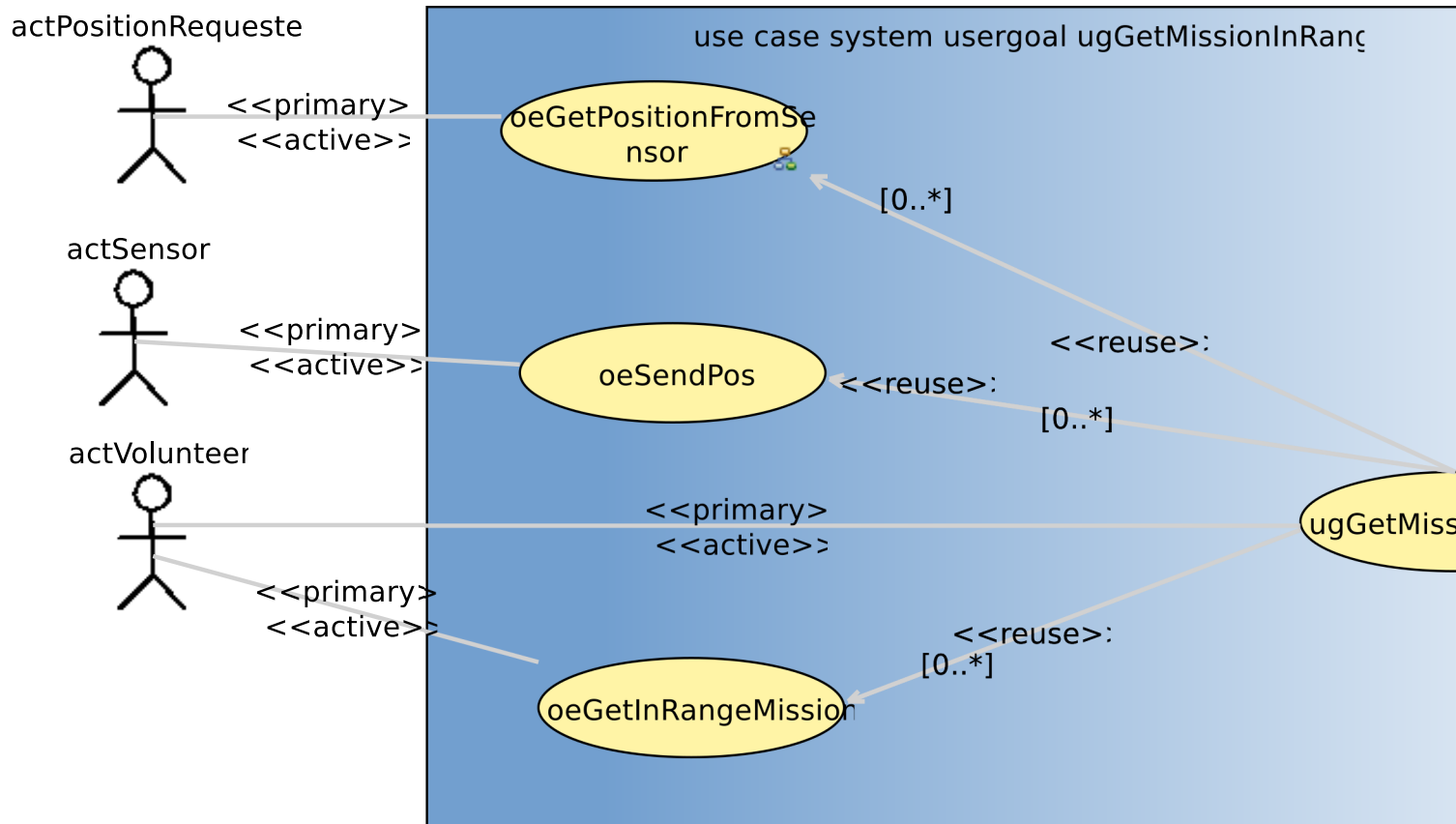


Figure 2.3:

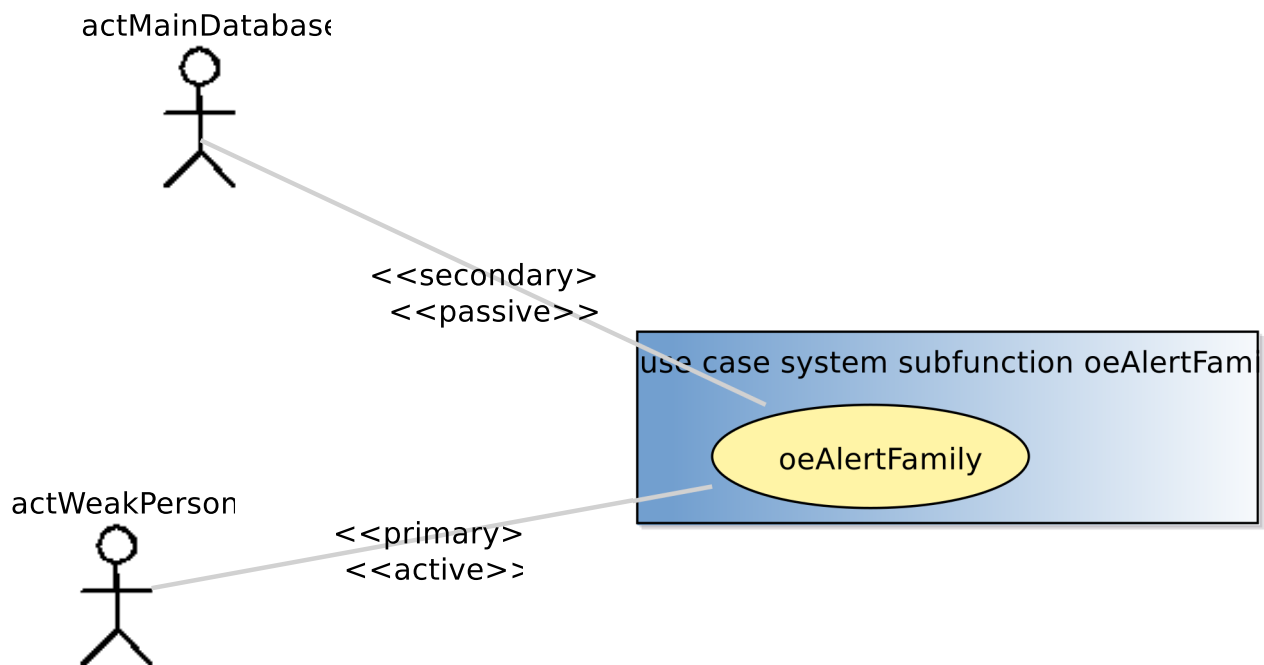


Figure 2.4:

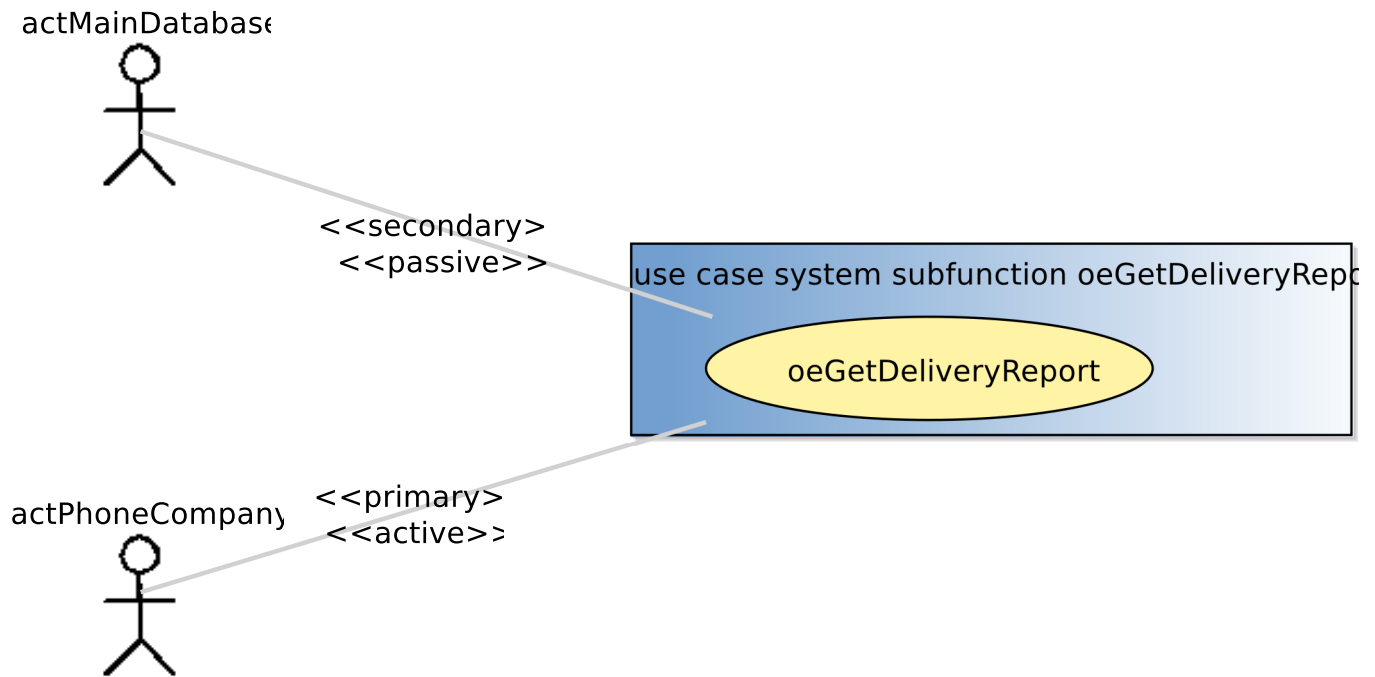


Figure 2.5:

2.3.2 Use Case Instance(s)

2.3.2.1 Use-Case Instance - `ucisuAlertAFamilyMember:suAlertAFamilyMember`

Figure 2.8 Alert family member

2.3.2.2 Use-Case Instance - `uciCallSelectedHelp:suCallSelectedHelpRequest`

Figure 2.9 Call Selected help request

2.3.2.3 Use-Case Instance - `uciSendHelpRequest:ugRequestHelp`

Figure 2.10 Send help request

2.3.2.4 Use-Case Instance - `uciGetInRangeMission:ugGetMissionInRange`

Figure 2.11 Get in range mission

2.3.2.5 Use-Case Instance - `uciGetPendingHelpRequests:ugRetrievePendingHelpRequestDetails`

Figure 2.12 Get pending help requests

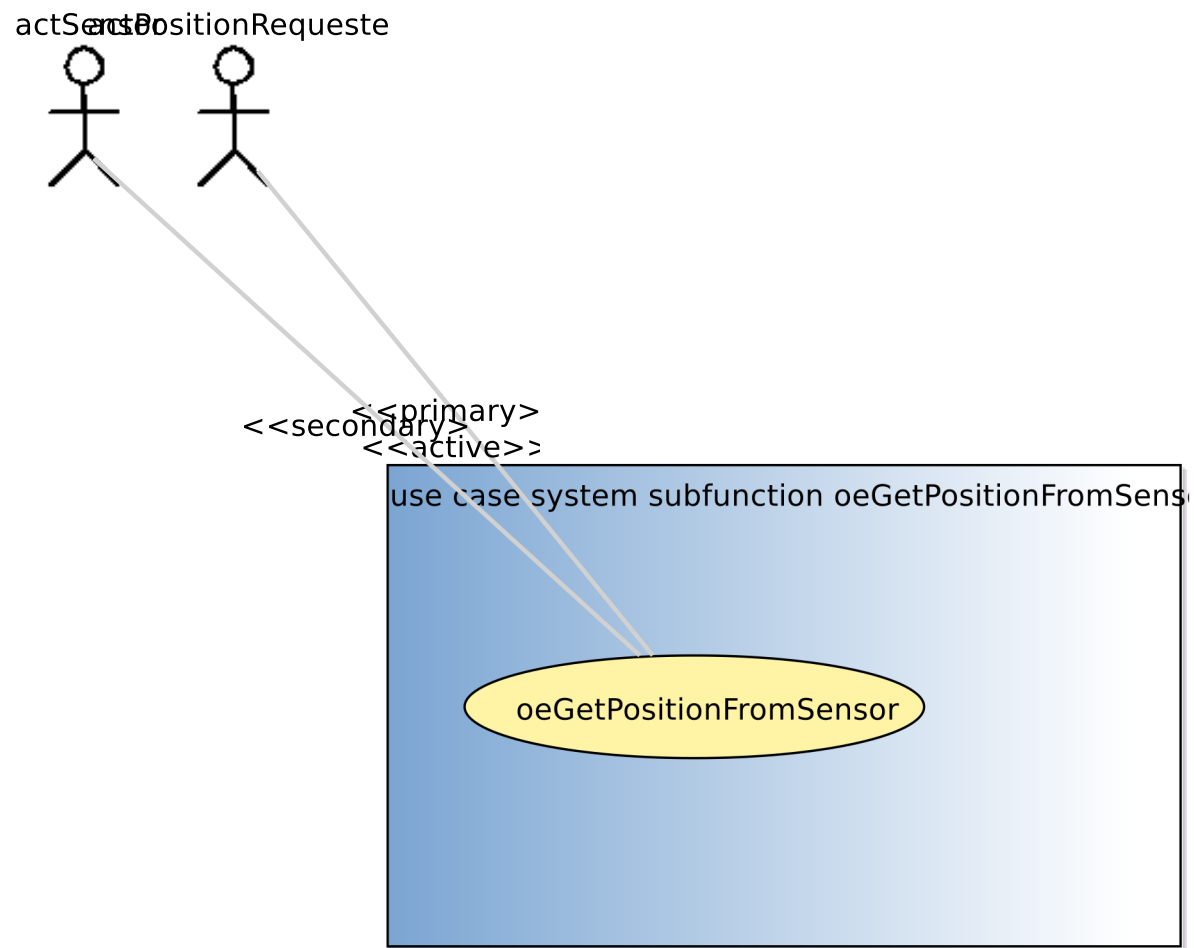


Figure 2.6:

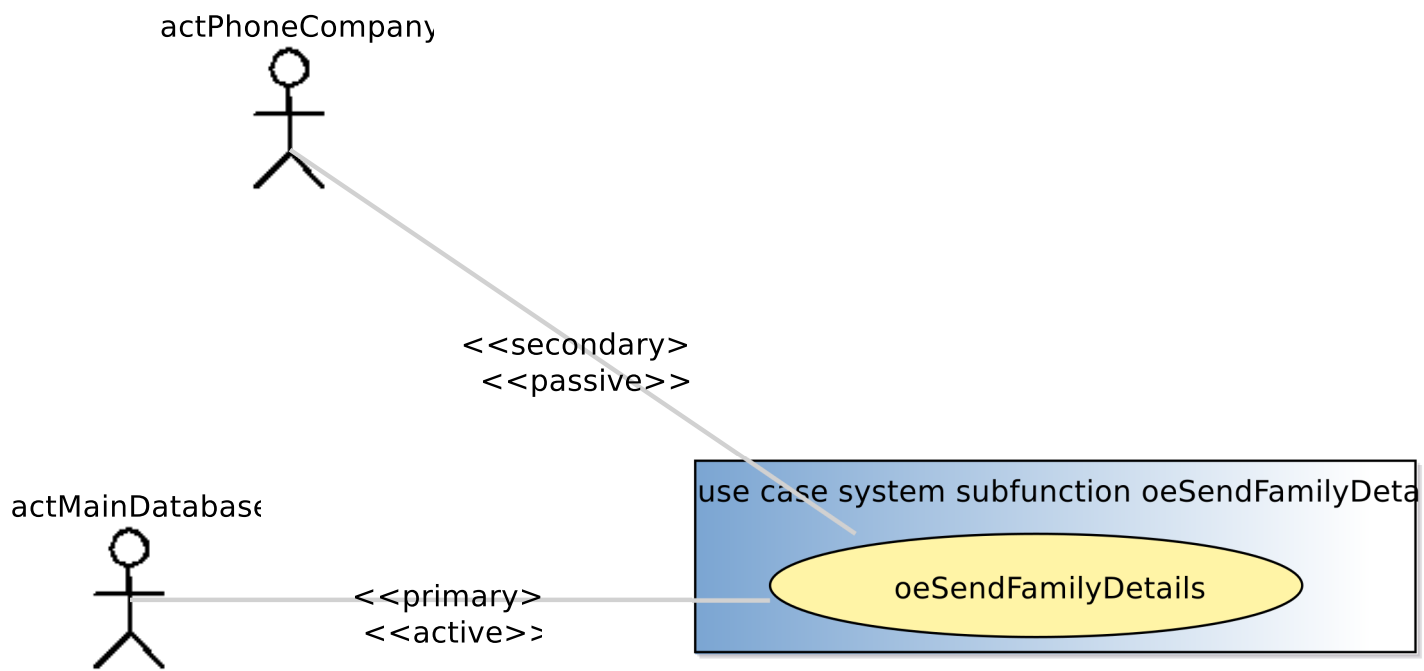


Figure 2.7:

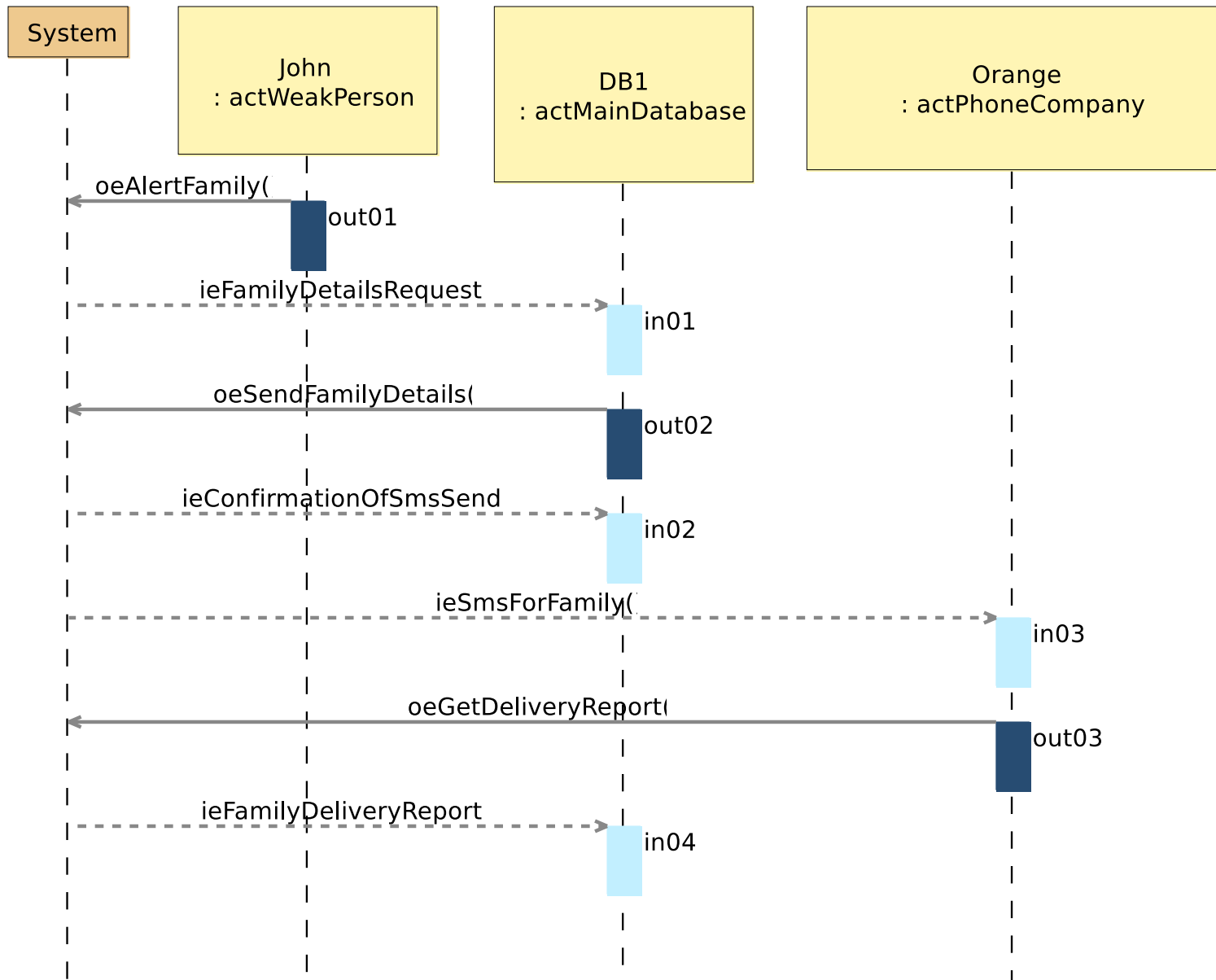


Figure 2.8:

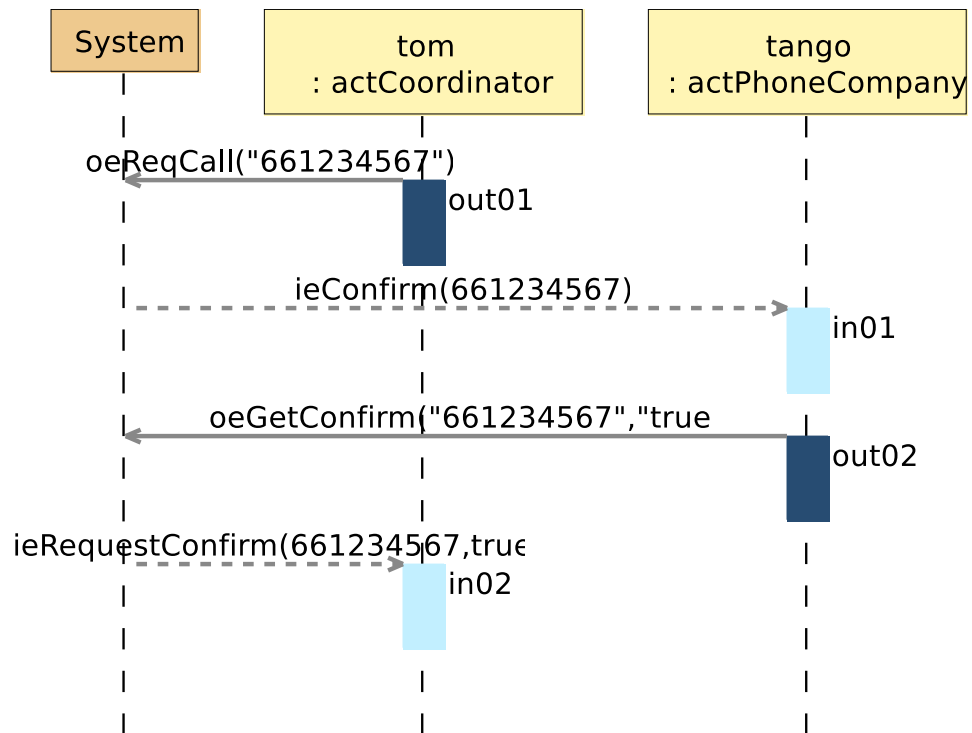


Figure 2.9:

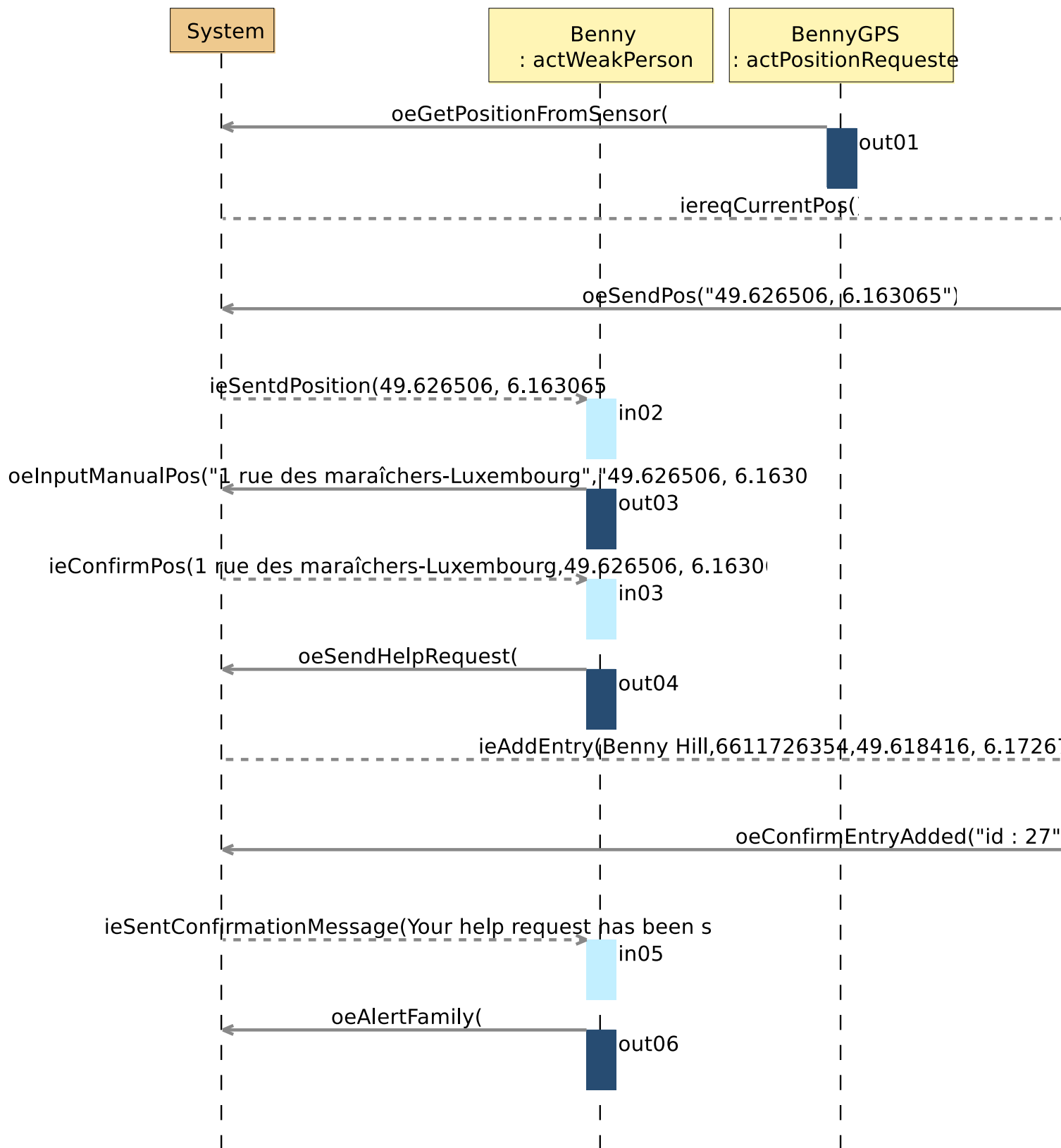


Figure 2.10:

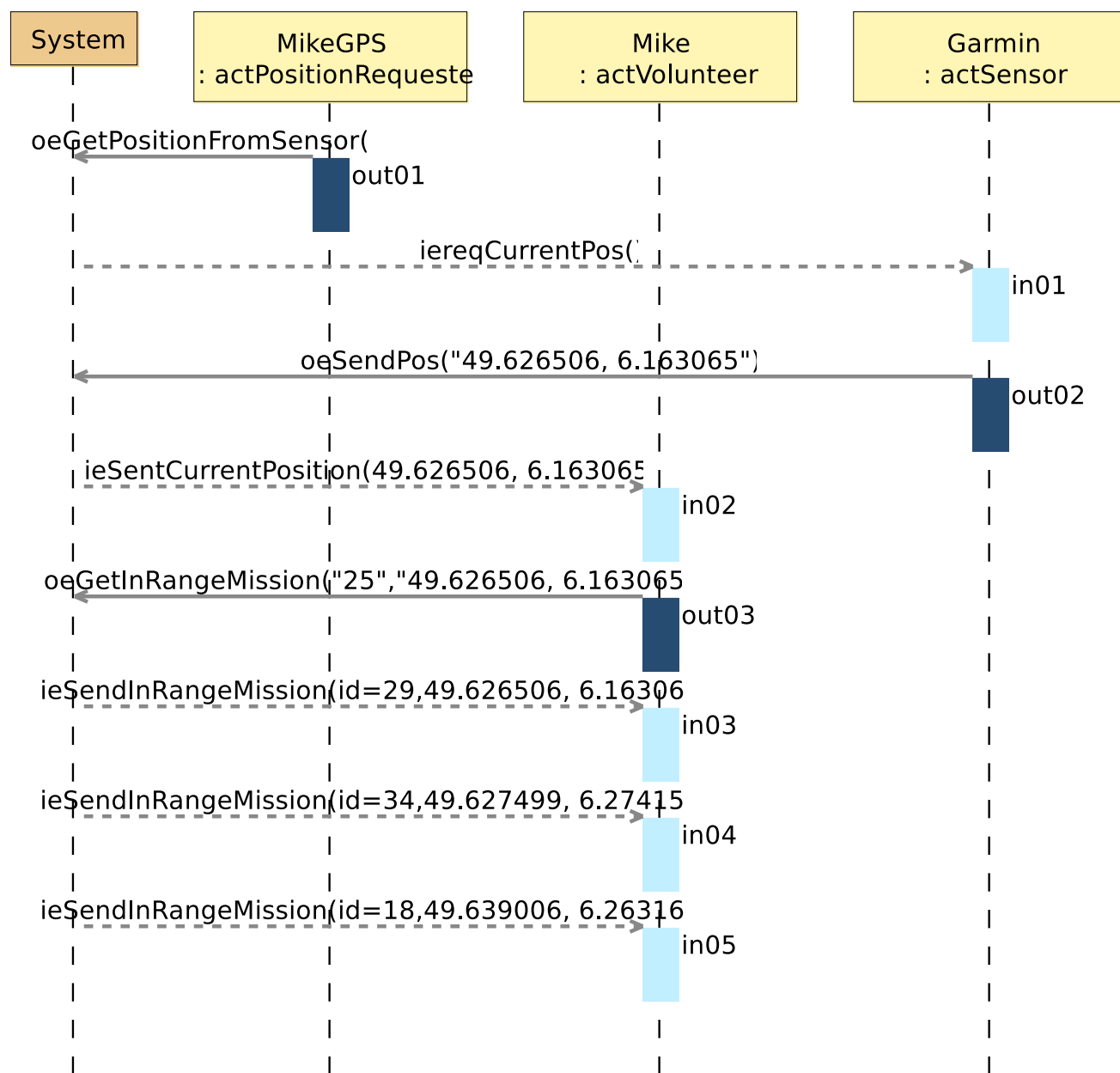


Figure 2.11:

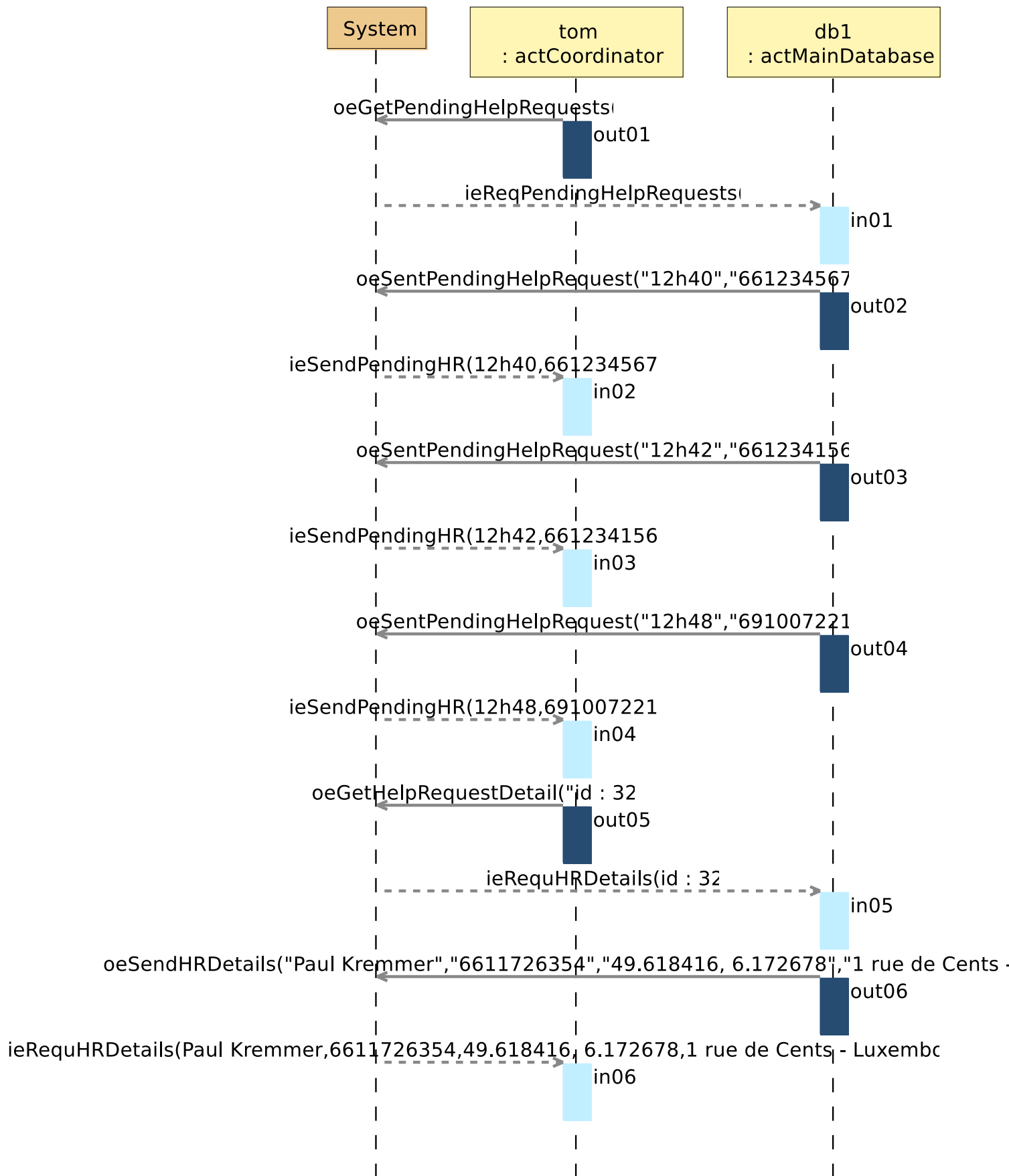


Figure 2.12:

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 **actCoordinator** Actor

ACTOR	
<i>actCoordinator</i> Environment Coordinator	
OutputInterfaces	
OUT 1	oeLogin () :ptBoolean
OUT 2	oeLogout () :ptBoolean
OUT 3	oeGetPendingHelpRequests () :ptBoolean
OUT 4	oeGetHelpRequestDetail (AdtHelpRequestId:dtHRid) :ptBoolean
OUT 5	oeProceedCall () :ptBoolean
OUT 6	oeSetRiskLevel () :ptBoolean
OUT 7	oeGetVolunteersList () :ptBoolean
OUT 8	oeReqCall () :ptBoolean
OUT 9	oeReqCheckbox () :ptBoolean
OUT 10	oeSendFilledCheckbox () :ptBoolean

continues in next page ...

... Actor table continuation

OUT 11	oeConfirmPriority() :ptBoolean
InputInterfaces	
IN 1	ieSendPendingHelpRequestList (AdtTime:dtTime, AdtPhoneNumber:dtPhoneNumber) :ptBoolean
IN 2	ieSendHelpRequestDetail (AdtName:dtName, AdtPhoneNumber:dtPhoneNumber, AdtCoordinates:dtCoordinates, AdtAddress:dtAddress) :ptBoolean
IN 3	ieSendVolunteerList () :ptBoolean
IN 4	ieConfirm() :ptBoolean
IN 5	ieSendCheckbox () :ptBoolean
IN 6	ieSendCalculatedPriority () :ptBoolean
IN 7	ieSendResult () :ptBoolean

3.2.2 actMainDatabase Actor

ACTOR	
<i>actMainDatabase</i>	
Environment Main Database	
OutputInterfaces	
OUT 1	oeSentPendingHelpRequest (AdtTime:dtTime, AdtPhoneNumber:dtPhoneNumber) :
OUT 2	oeSendHRDetails (AdtName:dtName, AdtPhoneNumber:dtPhoneNumber, AdtCoordinates:dtCoordinates, AdtAddress:dtAddress) :ptBoolean
OUT 3	oeSendFamilyDetails (AdtName:dtName, AdtPhoneNumber:dtPhoneNumber, AdtMessage:dtMessage) :ptBoolean
OUT 4	oeConfirmEntryAdded (AdtId:dtHRid, AdtConfirmation:ptBoolean) :ptBoolean
InputInterfaces	
IN 1	ieReqPendingHelpRequests () :ptBoolean
IN 2	ieRequHRDetails (AdtId:dtHRid) :ptBoolean
IN 3	ieSendPendingHR (AdtTime:dtTime) :ptBoolean
IN 4	ieFamilyDetailsRequest () :ptBoolean
IN 5	ieConfirmationOfSmsSend () :ptBoolean

continues in next page ...

...Actor table continuation

IN 6	ieFamilyDeliveryReport () :ptBoolean
IN 7	ieAddEntry (AdtName:dtName, AdtPhoneNumber:dtPhoneNumber, AdtCoordinates:dtCoordinates, AdtAddress:dtAddress) :ptBoolean

3.2.3 actPhoneCompany Actor

ACTOR	
actPhoneCompany	
Env Phone company	
OutputInterfaces	
OUT 1	oeGetConfirm () :ptBoolean
OUT 2	oeGetDeliveryReport () :ptBoolean
InputInterfaces	
IN 1	ieRequestConfirm (AdtPhoneNumber:dtPhoneNumber) :ptBoolean
IN 2	ieSmsForFamily (AdtPhoneNumber:dtPhoneNumber, AdtMessage:dtMessage) :ptBoolean

3.2.4 actPositionInputActor Actor

ACTOR	
actPositionInputActor	
Env PositionInputActor	
OutputInterfaces	
OUT 1	oeInputPost () :ptBoolean
InputInterfaces	
IN 1	ieSentPosition () :ptBoolean

3.2.5 actPositionRequester Actor

ACTOR	
actPositionRequester	
Env PositionRequester	
OutputInterfaces	
OUT 1	oeGetPositionFromSensor () :ptBoolean
InputInterfaces	
IN 1	ieSendSensorPosition () :ptBoolean

continues in next page ...

... **Actor table continuation**

3.2.6 actSensor Actor

ACTOR	
<i>actSensor</i>	
Env Sensor	
OutputInterfaces	
OUT 1	oeSendPos () :ptBoolean
InputInterfaces	
IN 1	iereqCurrentPos () :ptBoolean

3.2.7 actVolunteer Actor

ACTOR	
<i>actVolunteer</i>	
Env Volunteer	
OutputInterfaces	
OUT 1	oeLogin () :ptBoolean
OUT 2	oeLogout () :ptBoolean
OUT 3	oeGetPosition () :ptBoolean
OUT 4	oeGetMissionInRagne (AdtRange:dtRange) :ptBoolean
OUT 5	oeAcceptMission () :ptBoolean
OUT 6	oeInputPos () :ptBoolean
OUT 7	oeSendPosAndInfo () :ptBoolean
OUT 8	oeGetRange () :ptBoolean
InputInterfaces	
IN 1	ieSentCurrentPosition (AdtCoordinates:dtCoordinates) :ptBoolean
IN 2	ieSentMissionConfirmation () :ptBoolean
IN 3	ieSendRange () :ptBoolean
IN 4	ieSendInRangeMission (AdtId:dtHRid, AdtCoordinates:dtCoordinates) :ptBoolean

3.2.8 **actWeakPerson** Actor

ACTOR	
<i>actWeakPerson</i>	
Env WeakPerson	
OutputInterfaces	
OUT 1	oeSendHelpRequest () :ptBoolean
OUT 2	oeLogin () :ptBoolean
OUT 3	oeLogout () :ptBoolean
OUT 4	oeGetpostition () :ptBoolean
OUT 5	oeInputManualPos () :ptBoolean
OUT 6	oeGetInfo () :ptBoolean
OUT 7	oeGetPositionFromSensor () :ptBoolean
OUT 8	oeAlertFamily () :ptBoolean
InputInterfaces	
IN 1	ieSentdPosition () :ptBoolean
IN 2	ieSentConfirmationMessage () :ptBoolean
IN 3	ieSendInfo () :ptBoolean
IN 4	ieConfirmPos () :ptBoolean

3.2.9 **actWeakPersonFamily** Actor

ACTOR	
<i>actWeakPersonFamily</i>	
Env WeakPersonFamily	
OutputInterfaces	
OUT 1	oeSubscribe () :ptBoolean
OUT 2	oeConfirmMessage () :ptBoolean
OUT 3	oeConfirmCall () :ptBoolean
InputInterfaces	
IN 1	ieSentPosition () :ptBoolean

continues in next page ...

... Actor table continuation

IN 2	<code>ieGetMessage() : ptBoolean</code>
IN 3	<code>ieGetCall() : ptBoolean</code>

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

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

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 Summary Level Use Cases

- `lu.uni.lassy.excalibur.g01.specification.usecases.coordinator.suCallSelectedHelpRequest`
- `lu.uni.lassy.excalibur.g01.specification.usecases.suAlertAFamilyMember`
- `lu.uni.lassy.excalibur.g01.specification.usecases.ugRequestHelp`

A.1.2 Undocumented User-Goal Level Use Cases

- `lu.uni.lassy.excalibur.g01.specification.usecases.coordinator.ugAssignPriorityToHelpRequest`
- `lu.uni.lassy.excalibur.g01.specification.usecases.volunteer.ugGetMissionInRange`
- `lu.uni.lassy.excalibur.g01.specification.usecases.coordinator.ugRetrievePendingHelpRequestDetails`

A.1.3 Undocumented Subfunction Level Use Cases

- `lu.uni.lassy.excalibur.g01.specification.usecases.coordinator.oeConfirmPriority`
- `lu.uni.lassy.excalibur.g01.specification.usecases.coordinator.oeGetConfirm`
- `lu.uni.lassy.excalibur.g01.specification.usecases.coordinator.oeGetHelpRequestDetail`
- `lu.uni.lassy.excalibur.g01.specification.usecases.volunteer.oeGetInRangeMission`
- `lu.uni.lassy.excalibur.g01.specification.usecases.coordinator.oeGetPendingHelpRequests`
- `lu.uni.lassy.excalibur.g01.specification.usecases.coordinator.oeReqCall`
- `lu.uni.lassy.excalibur.g01.specification.usecases.coordinator.oeReqCheckbox`
- `lu.uni.lassy.excalibur.g01.specification.usecases.coordinator.oeSendFilledCheckbox`
- `lu.uni.lassy.excalibur.g01.specification.usecases.coordinator.oeSendHRDetails`
- `lu.uni.lassy.excalibur.g01.specification.usecases.coordinator.oeSentPendingHelpRequest`

- lu.uni.lassy.excalibur.g01.specification.usecases.oeAlertFamily
- lu.uni.lassy.excalibur.g01.specification.usecases.oeConfirmEntryAdded
- lu.uni.lassy.excalibur.g01.specification.usecases.oeGetDeliveryReport
- lu.uni.lassy.excalibur.g01.specification.usecases.oeGetPositionFromSensor
- lu.uni.lassy.excalibur.g01.specification.usecases.oeInputManualPos
- lu.uni.lassy.excalibur.g01.specification.usecases.oeInputPost
- lu.uni.lassy.excalibur.g01.specification.usecases.oeSendFamilyDetails
- lu.uni.lassy.excalibur.g01.specification.usecases.oeSendHelpRequest
- lu.uni.lassy.excalibur.g01.specification.usecases.oeSendPos

A.2 Undocumented Use Case Instances

A.2.1 Undocumented Summary Level Use Case Instances

- lu.uni.lassy.excalibur.g01.specification.usecases.coordinator.uciCallSelectedHelp
- lu.uni.lassy.excalibur.g01.specification.usecases.uciSendHelpRequest
- usecases.ucisuAlertAFamilyMember.ucisuAlertAFamilyMember

A.2.2 Undocumented User-Goal Level Use Case Instances

- lu.uni.lassy.excalibur.g01.specification.usecases.volunteer.uciGetInRangeMission
- lu.uni.lassy.excalibur.g01.specification.usecases.coordinator.uciGetPendingHelpRequests

A.3 Undocumented Actors

- lu.uni.lassy.excalibur.g01.specification.environment.actGeneralPopulation

A.4 Undocumented Primary Types

A.4.1 Undocumented Primary Classe Types

- lu.uni.lassy.excalibur.g01.specification.concepts.primarytypes.classes.ctState

A.4.2 Undocumented Primary Datatype Types

- lu.uni.lassy.excalibur.g01.specification.concepts.primarytypes.datatypes.dtAddress
- lu.uni.lassy.excalibur.g01.specification.concepts.primarytypes.datatypes.dtCoordinates
- lu.uni.lassy.excalibur.g01.specification.concepts.primarytypes.datatypes.dtHRid
- lu.uni.lassy.excalibur.g01.specification.concepts.primarytypes.datatypes.dtMessage
- lu.uni.lassy.excalibur.g01.specification.concepts.primarytypes.datatypes.dtName

- lu.uni.lassy.excalibur.g01.specification.concepts.primarytypes.datatypes.dtPhoneNumber
- lu.uni.lassy.excalibur.g01.specification.concepts.primarytypes.datatypes.dtRange

A.5 Undocumented Secondary Types

A.5.1 Undocumented Secondary Datatype Types

- lu.uni.lassy.excalibur.g01.specification.concepts.secondarytypes.datatypes.dtTime

A.6 Undocumented Operation Specifications

- lu.uni.lassy.excalibur.g01.specification.concepts.primarytypes.datatypes.dtCoordinates.is
- lu.uni.lassy.excalibur.g01.specification.concepts.primarytypes.datatypes.dtHRid.is
- lu.uni.lassy.excalibur.g01.specification.concepts.primarytypes.datatypes.dtMessage.is
- lu.uni.lassy.excalibur.g01.specification.concepts.primarytypes.datatypes.dtName.is
- lu.uni.lassy.excalibur.g01.specification.concepts.primarytypes.datatypes.dtPhoneNumber.is
- lu.uni.lassy.excalibur.g01.specification.concepts.primarytypes.datatypes.dtRange.is
- lu.uni.lassy.excalibur.g01.specification.environment.actCoordinator.outactCoordinator.oeConfirmPriority
- lu.uni.lassy.excalibur.g01.specification.environment.actCoordinator.outactCoordinator.oeGetHelpRequestDetail
- lu.uni.lassy.excalibur.g01.specification.environment.actCoordinator.outactCoordinator.oeGetPendingHelpRequest
- lu.uni.lassy.excalibur.g01.specification.environment.actCoordinator.outactCoordinator.oeGetVolunteersList
- lu.uni.lassy.excalibur.g01.specification.environment.actCoordinator.outactCoordinator.oeLogin
- lu.uni.lassy.excalibur.g01.specification.environment.actCoordinator.outactCoordinator.oeLogout
- lu.uni.lassy.excalibur.g01.specification.environment.actCoordinator.outactCoordinator.oeProceedCall
- lu.uni.lassy.excalibur.g01.specification.environment.actCoordinator.outactCoordinator.oeReqCall
- lu.uni.lassy.excalibur.g01.specification.environment.actCoordinator.outactCoordinator.oeReqCheckbox
- lu.uni.lassy.excalibur.g01.specification.environment.actCoordinator.outactCoordinator.oeSendFilledCheckbox
- lu.uni.lassy.excalibur.g01.specification.environment.actCoordinator.outactCoordinator.oeSetRiskLevel
- lu.uni.lassy.excalibur.g01.specification.environment.actMainDatabase.outactPendingHelpRequestList.oeConfirmE
- lu.uni.lassy.excalibur.g01.specification.environment.actMainDatabase.outactPendingHelpRequestList.oeSendFam
- lu.uni.lassy.excalibur.g01.specification.environment.actMainDatabase.outactPendingHelpRequestList.oeSendHRL
- lu.uni.lassy.excalibur.g01.specification.environment.actMainDatabase.outactPendingHelpRequestList.oeSentPend
- lu.uni.lassy.excalibur.g01.specification.environment.actPhoneCompany.outactPhoneCompany.oeGetConfirm
- lu.uni.lassy.excalibur.g01.specification.environment.actPhoneCompany.outactPhoneCompany.oeGetDeliveryRepo

- lu.uni.lassy.excalibur.g01.specification.environment.actPositionInputActor.outactPositionInputActor.oeInput
- lu.uni.lassy.excalibur.g01.specification.environment.actPositionRequester.outactPositionRequester.oeGetPos
- lu.uni.lassy.excalibur.g01.specification.environment.actSensor.outactSensor.oeSendPos
- lu.uni.lassy.excalibur.g01.specification.environment.actVolunteer.outactVolunteer.oeAcceptMission
- lu.uni.lassy.excalibur.g01.specification.environment.actVolunteer.outactVolunteer.oeGetMissionInRagne
- lu.uni.lassy.excalibur.g01.specification.environment.actVolunteer.outactVolunteer.oeGetPosition
- lu.uni.lassy.excalibur.g01.specification.environment.actVolunteer.outactVolunteer.oeGetRange
- lu.uni.lassy.excalibur.g01.specification.environment.actVolunteer.outactVolunteer.oeInputPos
- lu.uni.lassy.excalibur.g01.specification.environment.actVolunteer.outactVolunteer.oeLogin
- lu.uni.lassy.excalibur.g01.specification.environment.actVolunteer.outactVolunteer.oeLogout
- lu.uni.lassy.excalibur.g01.specification.environment.actVolunteer.outactVolunteer.oeSendPosAndInfo
- lu.uni.lassy.excalibur.g01.specification.environment.actWeakPerson.outactWeakPerson.oeAlertFamily
- lu.uni.lassy.excalibur.g01.specification.environment.actWeakPerson.outactWeakPerson.oeGetInfo
- lu.uni.lassy.excalibur.g01.specification.environment.actWeakPerson.outactWeakPerson.oeGetPositionFromS
- lu.uni.lassy.excalibur.g01.specification.environment.actWeakPerson.outactWeakPerson.oeGetpostition
- lu.uni.lassy.excalibur.g01.specification.environment.actWeakPerson.outactWeakPerson.oeInputManualPos
- lu.uni.lassy.excalibur.g01.specification.environment.actWeakPerson.outactWeakPerson.oeLogin
- lu.uni.lassy.excalibur.g01.specification.environment.actWeakPerson.outactWeakPerson.oeLogout
- lu.uni.lassy.excalibur.g01.specification.environment.actWeakPerson.outactWeakPerson.oeSendHelpRequest
- lu.uni.lassy.excalibur.g01.specification.environment.actWeakPersonFamily.outactWeakPersonFamily.oeConf
- lu.uni.lassy.excalibur.g01.specification.environment.actWeakPersonFamily.outactWeakPersonFamily.oeConf
- lu.uni.lassy.excalibur.g01.specification.environment.actWeakPersonFamily.outactWeakPersonFamily.oeSubs

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 uuid5a859098d2dc4161afdb7ab26ea5a813 {
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 Adriano
3 * @date Sat Oct 22 12:57:25 CEST 2016
4 */
5
6 package lu.uni.lassy.excalibur.g01.specification.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  import lu.uni.lassy.excalibur.g01.specification.concepts.primarytypes.datatypes
13
14  Environment Model {
15
16    actor actSensor role rnactSensor cardinality [1..*] {
17
18      input interface inactSensor {
19        operation iereqCurrentPos() : ptBoolean
20      }
21      output interface outactSensor {
22        operation oeSendPos() : ptBoolean
23      }
24    }
25
26    actor actPositionInputActor role rnactPositionInputActor cardinality [1..*] {
27
28      input interface inactPositionInputActor {
29        operation ieSentPosition() : ptBoolean
30      }
31      output interface outactPositionInputActor {
32        operation oeInputPost() : ptBoolean
33      }
34    }
35
36    actor actCoordinator role rnactCoordinator cardinality [1..*] {
```

```

37
38 input interface inactCoordinator {
39     operation ieSendPendingHelpRequestList(AdtTime:dtTime,AdtPhoneNumber :dtPhoneNumber) : ptBoolean
40     operation ieSendHelpRequestDetail(AdtName : dtName, AdtPhoneNumber : dtPhoneNumber ,
        AdtCoordinates : dtCoordinates , AdtAddress : dtAddress) : ptBoolean
41     operation ieSendVolunteerList() : ptBoolean
42     operation ieConfirm() : ptBoolean
43     operation ieSendCheckbox() : ptBoolean
44     operation ieSendCalculatedPriority() : ptBoolean
45     operation ieSendResult() : ptBoolean
46 }
47 output interface outactCoordinator {
48     operation oeLogin() : ptBoolean
49     operation oeLogout() : ptBoolean
50     operation oeGetPendingHelpRequests() : ptBoolean
51     operation oeGetHelpRequestDetail(AdtHelpRequestId : dtHRid) : ptBoolean
52     operation oeProceedCall() : ptBoolean
53     operation oeSetRiskLevel() : ptBoolean
54     operation oeGetVolunteersList() : ptBoolean
55     operation oeReqCall() : ptBoolean
56     operation oeReqCheckbox() : ptBoolean
57     operation oeSendFilledCheckbox() : ptBoolean
58     operation oeConfirmPriority() : ptBoolean
59 }
60 }
61
62 actor actWeakPerson role rnactWeakPerson cardinality [1..*] {
63
64     input interface inactWeakPerson {
65         operation ieSentdPosition() : ptBoolean
66         operation ieSentConfirmationMessage() : ptBoolean
67         operation ieSendInfo() : ptBoolean
68         operation ieConfirmPos() : ptBoolean
69     }
70 }
71 output interface outactWeakPerson {
72     operation oeSendHelpRequest() : ptBoolean
73     operation oeLogin() : ptBoolean
74     operation oeLogout() : ptBoolean
75     operation oeGetpostition() : ptBoolean
76     operation oeInputManualPos() : ptBoolean
77     operation oeGetInfo() : ptBoolean
78     operation oeGetPositionFromSensor() : ptBoolean
79     operation oeAlertFamily() : ptBoolean
80 }
81 }
82
83 actor actVolunteer role rnactVolunteer cardinality [1..*] {
84
85     input interface inactVolunteer {
86         operation ieSentCurrentPosition(AdtCoordinates : dtCoordinates) : ptBoolean
87         operation ieSentMissionConfirmation() : ptBoolean
88         operation ieSendRange() : ptBoolean
89         operation ieSendInRangeMission(AdtId : dtHRid, AdtCoordinates : dtCoordinates) : ptBoolean
90     }
91     output interface outactVolunteer {
92         operation oeLogin() : ptBoolean
93         operation oeLogout() : ptBoolean
94         operation oeGetPosition() : ptBoolean
95
96         operation oeGetMissionInRagne(AdtRange: dtRange) : ptBoolean
97         operation oeAcceptMission() : ptBoolean
98         operation oeInputPos() : ptBoolean
99         operation oeSendPosAndInfo() : ptBoolean
100        operation oeGetRange() : ptBoolean
101    }
102 }
103 }
104
105 actor actGeneralPopulation role rnactGeneralPopulation cardinality [1..*] {

```

```

106
107 input interface inactGeneralPopulation {
108
109 }
110 output interface outactGeneralPopulation {
111
112 }
113 }
114
115 actor actWeakPersonFamily role rnactWeakPersonFamily cardinality [1..*] {
116
117 input interface inactWeakPersonFamily {
118 operation ieSentPosition() : ptBoolean
119 operation ieGetMessage() : ptBoolean
120 operation ieGetCall() : ptBoolean
121
122 }
123 output interface outactWeakPersonFamily {
124
125 operation oeSubscribe() : ptBoolean
126 operation oeConfirmMessage() : ptBoolean
127 operation oeConfirmCall() : ptBoolean
128
129 }
130 }
131
132 actor actMainDatabase role rnactMainDatabase cardinality [1..*] {
133
134 input interface inactPendingHelpRequestList {
135 operation ieReqPendingHelpRequests() : ptBoolean
136 operation ieRequHRDetails(AdtId :dtHRid) : ptBoolean
137 operation ieSendPendingHR(AdtTime : dtTime) : ptBoolean
138 operation ieFamilyDetailsRequest() : ptBoolean
139 operation ieConfirmationOfSmsSend() : ptBoolean
140 operation ieFamilyDeliveryReport() : ptBoolean
141 operation ieAddEntry(AdtName : dtName, AdtPhoneNumber : dtPhoneNumber , AdtCoordinates :
    dtCoordinates , AdtAddress : dtAddress) : ptBoolean
142 }
143 output interface outactPendingHelpRequestList {
144 operation oeSentPendingHelpRequest(AdtTime:dtTime,AdtPhoneNumber :dtPhoneNumber) : ptBoolean
145 operation oeSendHRDetails(AdtName : dtName, AdtPhoneNumber : dtPhoneNumber , AdtCoordinates :
    dtCoordinates , AdtAddress : dtAddress) : ptBoolean
146 operation oeSendFamilyDetails(AdtName : dtName, AdtPhoneNumber : dtPhoneNumber, AdtMessage :
    dtMessage) : ptBoolean
147 operation oeConfirmEntryAdded(AdtId : dtHRid , AdtConfirmation : ptBoolean) : ptBoolean
148 }
149 }
150
151 actor actPhoneCompany role rnactPhoneCompany cardinality [1..*]{
152 input interface inactPhoneCompany{
153 operation ieRequestConfirm(AdtPhoneNumber : dtPhoneNumber) : ptBoolean
154 operation ieSmsForFamily(AdtPhoneNumber : dtPhoneNumber, AdtMessage : dtMessage) : ptBoolean
155 }
156 output interface outactPhoneCompany{
157 operation oeGetConfirm() : ptBoolean
158 operation oeGetDeliveryReport() : ptBoolean
159 }
160 }
161
162 actor actPositionRequester role rnactPositionRequester cardinality [1..*] {
163
164 input interface inactPositionRequester {
165 operation ieSendSensorPosition() : ptBoolean
166 }
167 output interface outactPositionRequester {
168 operation oeGetPositionFromSensor() : ptBoolean
169 }
170 }
171
172 }

```

173 }

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

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

```

1 /*
2 * @author Adriano
3 * @date Sat Oct 22 12:57:25 CEST 2016
4 */
5
6 package lu.uni.lassy.excalibur.g01.specification.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 Adriano
3 * @date Sat Oct 22 12:57:25 CEST 2016
4 */
5
6 package lu.uni.lassy.excalibur.g01.specification.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 Adriano
3 * @date Sat Oct 22 12:57:25 CEST 2016
4 */
5
6 package lu.uni.lassy.excalibur.g01.specification.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 dtHRid {
22       attribute value : ptInteger
23       operation is() : ptBoolean
24     }
25
26     datatype dtName {
27       attribute value : ptString
28       operation is() : ptBoolean
29     }
30
31     datatype dtCoordinates {
32       attribute long : ptReal
33       attribute lat : ptReal
34       operation is() : ptBoolean
35     }
36
37     datatype dtAddress {
38       attribute num : ptInteger
39       attribute street : ptString
40       attribute city : ptString
41     }
42
43     datatype dtMessage {
44       attribute MessageText : ptString
45       operation is() : ptBoolean
46     }
47
48     datatype dtRange {
49       attribute value : ptInteger
50       operation is() : ptBoolean
51     }
52 }

```

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 Adriano
3 * @date Sat Oct 22 12:57:25 CEST 2016
4 */
5
6 package lu.uni.lassy.excalibur.g01.specification.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 Adriano
3 * @date Sat Oct 22 12:57:25 CEST 2016
4 */
5
6 package lu.uni.lassy.excalibur.g01.specification.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 Adriano
3 * @date Sat Oct 22 12:57:25 CEST 2016
4 */
5
6 package lu.uni.lassy.excalibur.g01.specification.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     datatype dtTime {
17       attribute value : ptString
18     }
19
20   }
21
22 }
23 }

```

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

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

```

1 /*
2 * @author Adriano
3 * @date Sat Oct 22 12:57:25 CEST 2016
4 */
5
6 package lu.uni.lassy.excalibur.g01.specification.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/concepts/uc_{coordinator}.msr

```

1 /*
2 * @author Adriano
3 * @date Wed Nov 16 16:19:01 CET 2016
4 */
5
6 package lu.uni.lassy.excalibur.g01.specification.usecases.coordinator {
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.g01.specification.environment
13
14 Use Case Model {
15 use case instance uciGetPendingHelpRequests : ugRetrievePendingHelpRequestDetails() {
16 actors {
17 tom : actCoordinator
18 db1 : actMainDatabase
19
20 }
21 use case steps {
22 tom executed instance of subfunction oeGetPendingHelpRequests() {
23 ieReqPendingHelpRequests() returned to db1
24 }
25 db1 executed instance of subfunction oeSentPendingHelpRequest("12h40","661234567") {
26 ieSendPendingHR("12h40","661234567") returned to tom
27 }
28 db1 executed instance of subfunction oeSentPendingHelpRequest("12h42","661234156") {
29 ieSendPendingHR("12h42","661234156") returned to tom
30 }
31 db1 executed instance of subfunction oeSentPendingHelpRequest("12h48","691007221") {
32 ieSendPendingHR("12h48","691007221") returned to tom
33 }
34
35 tom executed instance of subfunction oeGetHelpRequestDetail("id : 32") {
36 ieRequHRDetails("id : 32") returned to db1
37
38 }
39 db1 executed instance of subfunction oeSendHRDetails("Paul Kremmer" , "6611726354", "49.618416,
40 6.172678" , "1 rue de Cents - Luxembourg") {
41 ieRequHRDetails("Paul Kremmer" , "6611726354", "49.618416, 6.172678" , "1 rue de Cents -
42 Luxembourg") returned to tom
43 }
44 }
45 }

```

```

43 }
44 use case instance uciCallSelectedHelp: suCallSelectedHelpRequest{
45 actors{
46   tom : actCoordinator
47   tango : actPhoneCompany
48 }
49 use case steps {
50   tom executed instance of subfunction oeReqCall("661234567"){
51     ieConfirm("661234567") returned to tango
52   }
53   tango executed instance of subfunction oeGetConfirm("661234567","true"){
54     ieRequestConfirm("661234567","true") returned to tom
55   }
56 }
57 }
58 }
59
60 use case system summary suCallSelectedHelpRequest() {
61
62   actor actCoordinator[primary,active]
63   actor actPhoneCompany[secondary]
64
65   step a : actCoordinator executes oeReqCall()
66   step b : actPhoneCompany executes oeGetConfirm()
67
68 }
69
70 use case system subfunction oeReqCall() {
71   actor actCoordinator[primary,active]
72
73   returned messages{
74     ieConfirm(dtPhoneNumber) returned to actCoordinator
75   }
76 }
77
78 use case system subfunction oeGetConfirm() {
79   actor actPhoneCompany[primary,active]
80
81   returned messages{
82     ieRequestConfirm(AdtPhoneNumber, dtBoolean) returned to actPhoneCompany
83   }
84 }
85 use case system usergoal ugRetrievePendingHelpRequestDetails() {
86   actor actCoordinator[primary,active]
87   actor actMainDatabase[secondary]
88
89   step a : actCoordinator executes oeGetPendingHelpRequests()
90   step b : actMainDatabase executes oeSentPendingHelpRequest()
91   step c : actCoordinator executes oeGetHelpRequestDetail()
92   step d : actMainDatabase executes oeSendHRDetails()
93
94 }
95
96 use case system subfunction oeSentPendingHelpRequest() {
97   actor actMainDatabase[primary,active]
98   actor actCoordinator[secondary]
99
100   returned messages{
101     ieSendPendingHR() returned to actCoordinator
102   }
103 }
104 }
105
106 use case system subfunction oeSendHRDetails() {
107   actor actMainDatabase[primary,active]
108   actor actCoordinator[secondary]
109
110   returned messages{
111     ieRequHRDetails() returned to actCoordinator
112   }

```



```

113 }
114
115 use case system subfunction oeGetPendingHelpRequests() {
116   actor actCoordinator[primary,active]
117   actor actMainDatabase[secondary]
118
119   returned messages{
120     ieReqPendingHelpRequests() returned to actMainDatabase
121     ieSendPendingHelpRequestList() returned to actCoordinator
122   }
123 }
124 }
125
126 use case system subfunction oeGetHelpRequestDetail() {
127   actor actCoordinator[primary,active]
128   actor actMainDatabase[secondary]
129
130   returned messages {
131     ieRequHRDetails() returned to actMainDatabase
132     ieSendHelpRequestDetail() returned to actCoordinator
133   }
134 }
135
136 use case system usergoal ugAssignPriorityToHelpRequest() {
137   actor actCoordinator [primary,active]
138   actor actMainDatabase[secondary]
139
140   step a : actCoordinator executes oeReqCheckbox()
141   step b : actCoordinator executes oeSendFilledCheckbox()
142   step c : actCoordinator executes oeConfirmPriority()
143 }
144
145 use case system subfunction oeReqCheckbox() {
146   actor actCoordinator[primary,active]
147   actor actMainDatabase[secondary]
148
149   returned messages{
150     ieSendCheckbox() returned to actCoordinator
151   }
152 }
153 }
154
155 use case system subfunction oeSendFilledCheckbox() {
156   actor actCoordinator[primary,active]
157   actor actMainDatabase[secondary]
158
159   returned messages{
160     ieSendCalculatedPriority() returned to actCoordinator
161   }
162 }
163 }
164
165 use case system subfunction oeConfirmPriority() {
166   actor actCoordinator[primary,active]
167   actor actMainDatabase[secondary]
168
169   returned messages{
170     ieSendResult() returned to actCoordinator
171   }
172 }
173 }
174
175 }
176
177 }

```

Listing B.10: Messir Spec. file *uc_cordinator.msr*.B.11 File *./src-gen/messir-spec/concepts/uc_volunteer.msr*

```

1 /*
2 * @author Adriano
3 * @date Sat Nov 19 15:04:07 CET 2016
4 */
5
6 package lu.uni.lassy.excalibur.g01.specification.usecases.volunteer {
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.g01.specification.environment
13 import lu.uni.lassy.excalibur.g01.specification.usecases
14
15 Use Case Model {
16   use case instance uciGetInRangeMission : ugGetMissionInRange {
17     actors {
18       MikeGPS : actPositionRequester
19       Mike : actVolunteer
20       Garmin : actSensor
21     }
22     use case steps {
23       MikeGPS executed instance of subfunction oeGetPositionFromSensor() {
24         iereqCurrentPos() returned to Garmin
25       }
26       Garmin executed instance of subfunction oeSendPos("49.626506, 6.163065") {
27         ieSentCurrentPosition("49.626506, 6.163065") returned to Mike
28       }
29       Mike executed instance of subfunction oeGetInRangeMission("25","49.63999, 6.16399") {
30         ieSendInRangeMission("id=29","49.626506, 6.163065") returned to Mike
31         ieSendInRangeMission("id=34","49.627499, 6.274156") returned to Mike
32         ieSendInRangeMission("id=18","49.639006, 6.263164") returned to Mike
33       }
34     }
35   }
36 }
37 }
38
39 use case system usergoal ugGetMissionInRange() {
40   actor actVolunteer[primary, active]
41   actor actPositionRequester[secondary]
42   actor actSensor[secondary]
43
44   step a: actPositionRequester executes oeGetPositionFromSensor()
45   step b: actSensor executes oeSendPos()
46   step c: actVolunteer executes oeGetInRangeMission()
47 }
48
49 use case system subfunction oeGetInRangeMission(){
50   actor actVolunteer[primary,active]
51
52   returned messages{
53     ieSendInRangeMission() returned to actVolunteer
54   }
55 }
56
57 }
58
59 }

```

Listing B.11: Messir Spec. file *uc_volunteer.msr*.

B.12 File `./src-gen/messir-spec/usecases/usecaseinstance-suAlertAFamilyMember-ucisuAlertAFamilyMember.msr`

```

1 package usecases.ucisuAlertAFamilyMember {
2 import lu.uni.lassy.excalibur.g01.specification.usecases
3 import lu.uni.lassy.excalibur.g01.specification.environment

```

```

4
5 Use Case Model {
6
7 use case instance ucisuAlertAFamilyMember : suAlertAFamilyMember{
8   actors {
9     John : actWeakPerson
10    DB1 : actMainDatabase
11    Orange : actPhoneCompany
12  }
13
14 use case steps {
15   John executed instance of subfunction oeAlertFamily() {
16     ieFamilyDetailsRequest() returned to DB1
17   }
18   DB1 executed instance of subfunction oeSendFamilyDetails() {
19     ieConfirmationOfSmsSend() returned to DB1
20     ieSmsForFamily() returned to Orange
21   }
22   Orange executed instance of subfunction oeGetDeliveryReport() {
23     ieFamilyDeliveryReport() returned to DB1
24   }
25 }
26 }
27 }
28 }
29 }

```

Listing B.12: Messir Spec.
 usecaseinstance-suAlertAFamilyMember-ucisuAlertAFamilyMember.msr.

file

B.13 File ./src-gen/messir-spec/usecases/usecases.msr

```

1 /*
2 * @author Adriano
3 * @date Sat Oct 22 12:57:25 CEST 2016
4 */
5
6 package lu.uni.lassy.excalibur.g01.specification.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.g01.specification.environment
13
14 Use Case Model {
15
16 use case instance uciSendHelpRequest : ugRequestHelp {
17   actors {
18
19     Benny : actWeakPerson
20     BennyGPS : actPositionRequester
21     Garmin : actSensor
22     DB1 : actMainDatabase
23   }
24
25 use case steps {
26   BennyGPS executed instance of subfunction oeGetPositionFromSensor() {
27     iereqCurrentPos() returned to Garmin
28   }
29   Garmin executed instance of subfunction oeSendPos("49.626506, 6.163065") {
30     ieSndtdPosition("49.626506, 6.163065") returned to Benny
31   }
32   Benny executed instance of subfunction oeInputManualPos("1 rue des marachers-Luxembourg", "
33     49.626506, 6.163065") {
34     ieConfirmPos("1 rue des marachers-Luxembourg", "49.626506, 6.163065") returned to Benny
35   }
36   Benny executed instance of subfunction oeSendHelpRequest() {

```

```

36         ieAddEntry("Benny Hill" , "6611726354", "49.618416, 6.172678" , "1 rue de Cents - Luxembourg")
           returned to DB1
37     }
38     DB1 executed instance of subfunction oeConfirmEntryAdded("id : 27","true") {
39         ieSentConfirmationMessage("Your help request has been sent") returned to Benny
40     }
41     Benny executed instance of subfunction oeAlertFamily() {
42     }
43 }
44 }
45 }
46 }
47
48 use case system summary ugRequestHelp() {
49
50     actor actWeakPerson[primary,active]
51     actor actSensor[secondary]
52     actor actPositionRequester[secondary]
53     actor actMainDatabase[secondary]
54
55     reuse oeSendHelpRequest[1..1]
56
57     step a: actPositionRequester executes oeGetPositionFromSensor()
58     step b : actSensor executes oeSendPos()
59     step c : actWeakPerson executes oeInputManualPos()
60     step d : actWeakPerson executes oeSendHelpRequest()
61     step e : actMainDatabase executes oeConfirmEntryAdded()
62     step f : actWeakPerson executes oeAlertFamily()
63
64     ordering constraint "step (a) is always the first step "
65     ordering constraint "step (b) must be executed after step (a) "
66     ordering constraint "step (f) may not be executed (if actWeakPerson is not signed up)"
67     ordering constraint "step (e) is always the last step "
68
69 }
70
71 use case system subfunction oeGetPositionFromSensor() {
72     actor actPositionRequester[primary,active]
73     actor actSensor[secondary]
74
75     returned messages{
76         iereqCurrentPos() returned to actSensor
77     }
78 }
79
80 use case system subfunction oeSendPos() {
81     actor actSensor[primary,active]
82     actor actWeakPerson[secondary]
83     actor actVolunteer[secondary]
84
85     returned messages {
86         ieSentdPosition() returned to actWeakPerson
87         ieSentCurrentPosition() returned to actVolunteer
88     }
89 }
90
91 use case system subfunction oeInputManualPos() {
92     actor actWeakPerson[primary,active]
93
94     returned messages{
95         ieConfirmPos() returned to actWeakPerson
96     }
97 }
98
99 use case system subfunction oeSendHelpRequest() {
100     actor actWeakPerson[primary,active]
101     actor actMainDatabase[secondary]
102
103     returned messages{
104         ieAddEntry() returned to actMainDatabase

```

```

105 }
106 }
107
108 use case system subfunction oeConfirmEntryAdded() {
109     actor actMainDatabase[primary,active]
110     actor actWeakPerson[secondary]
111     returned messages {
112         ieSentConfirmationMessage() returned to actWeakPerson
113     }
114 }
115
116 //-----
117
118 //Moved to *.usecases.coordinator.msrd
119
120 //-----
121
122 use case system subfunction oeInputPost() {
123     actor actPositionInputActor[primary,active]
124
125     returned messages {
126         ieSentPosition() returned to actPositionInputActor
127     }
128 }
129
130 //-----
131 use case system summary suAlertAFamilyMember() {
132     actor actWeakPerson [primary, active]
133     actor actPhoneCompany[secondary, active]
134     actor actMainDatabase[secondary, active]
135
136     reuse oeAlertFamily[1..*]
137     reuse oeSendFamilyDetails[1..*]
138     reuse oeGetDeliveryReport[1..*]
139
140     step a: actWeakPerson executes oeAlertFamily()
141     step b: actMainDatabase executes oeSendFamilyDetails()
142     step c: actPhoneCompany executes oeGetDeliveryReport()
143
144 }
145
146 use case system subfunction oeAlertFamily() {
147     actor actWeakPerson[primary,active]
148     actor actMainDatabase[secondary,passive]
149
150     returned messages {
151         ieFamilyDetailsRequest() returned to actMainDatabase
152     }
153 }
154
155 use case system subfunction oeSendFamilyDetails() {
156     actor actMainDatabase[primary,active]
157     actor actPhoneCompany[secondary, passive]
158     returned messages {
159         ieConfirmationOfSmsSend() returned to actMainDatabase
160         ieSmsForFamily() returned to actPhoneCompany
161     }
162 }
163 }
164
165 use case system subfunction oeGetDeliveryReport() {
166     actor actPhoneCompany[primary,active]
167     actor actMainDatabase[secondary, passive]
168     returned messages{
169         ieFamilyDeliveryReport() returned to actMainDatabase
170     }
171 }
172 }
173
174 }

```

175 }

Listing B.13: Messir Spec. file usecases.msr.

