

Philip Susan
Sergio Ferreira Rodrigues
Raphael Duarte Gomes

Issuing Organisation Name : CrisYs Corp



CRIS IS. CRIS WAS.

Messip User Manual

- v 0.5 -

Based on IEEE Std 1063-2001 [\[1\]](#)

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Contents

1	Product information	7
1.1	Identification	7
1.2	Copyright	7
1.3	Trademark notices	7
1.4	Restrictions	7
1.5	Warranties	7
1.6	Contractual obligations	7
1.7	Disclaimers	8
1.8	Contact	8
1.8.1	Online assistance	8
1.8.2	Telephone assistance	8
2	General Information	9
2.1	Scope	9
2.2	Purpose	9
2.3	Intended audience	9
2.4	SHeavy	9
2.4.1	Actors & Functionalities	10
2.4.2	Operating environment	12
2.5	Document structure	12
3	Usage Guide	13
3.1	Actors common procedures	13
3.1.1	Application Installation	13
3.1.2	Find a Person	13
3.1.3	Finding safe route	14
3.2	Administrator procedures	14
3.2.1	Software Installation	14
3.3	Coordinator procedures	15
3.3.1	Alert Management	15
3.3.2	Mission Management	15
3.3.3	Confirm The Alert State	15
3.3.4	Lift The Alert State	16
3.3.5	Handling Ressources	16
3.3.6	Request Set Up Camp Mission	16
3.3.7	Request Set Up Checkpoint Mission	17
3.3.8	Request Transfer Mission	17
3.3.9	Request Evacuation Mission	18
3.3.10	Accomplished Mission	18
3.3.11	Zone Management	19
3.3.12	Set Zone	19
3.3.13	Change Zone State	19
3.4	Medical Departement procedures	20
3.4.1	Handling of infected patient	20
3.5	Team Leader procedures	20

3.5.1	Accept Mission	20
3.5.2	Execute Mission	20
4	Software operations	23
4.1	Login	23
4.2	Logout	23
4.3	Insertion Into Database	24
4.4	Trigger Alert	24
4.5	Confirm Alert	24
4.6	Lift Alert	25
4.7	Delete User	25
4.8	Safe Place Finder	25
4.9	Find Person	26
4.10	Send Mission Set Camp	26
4.11	Send Mission Set Checkpoint	26
4.12	Send Mission Transfer	27
4.13	Send Mission Evacuation	27
4.14	Accept Mission	28
4.15	Decline Mission	28
4.16	Add Zone	28
4.17	Change Zone	29
4.18	Delete Zone	29
4.19	Alert GPS Zone	29
4.20	Forgot Password	30
4.21	Send Exact Amount of People	30
4.22	Get All Zones	30
4.23	See Affected Team to Mission	31
5	Error messages and problem resolutions	33
5.1	No Mobile Network	33
5.1.1	Problem identification	33
5.1.2	Probable cause	33
5.1.3	Corrective actions	33
5.2	No Internet Network	34
5.2.1	Problem identification	34
5.2.2	Probable cause	34
5.2.3	Corrective actions	34
5.3	Server down	34
5.3.1	Problem identification	34
5.3.2	Probable cause	34
5.3.3	Corrective actions	34
5.4	Access denied	35
5.4.1	Problem identification	35
5.4.2	Probable cause	35
5.4.3	Corrective actions	35
A	Referenced Illustrations	37
A.1	Screen Graphs	37
A.1.1	Application Screens	37
A.1.2	Web Screens	53
A.2	Error Warnings	57
	References	71

List of Figures

A.1 Home Screen	38
A.2 Alert Screen	38
A.3 Contact Screen	39
A.4 Menu Screen	39
A.5 News Screen	40
A.6 Map Screen	40
A.7 Safe Place Finder Screen	41
A.8 News Filter Screen	41
A.9 Trace Screen	42
A.10 Login Screen	44
A.11 Forgot Password Screen	44
A.12 Home Screen	45
A.13 Alert Screen	45
A.14 Menu Screen	46
A.15 Contact Screen	46
A.16 Account Screen	47
A.17 Start Mission Screen	47
A.18 Mission Screen	48
A.19 New Request Screen	48
A.20 News Screen	49
A.21 Map Screen	49
A.22 Safe Place Finder Screen	50
A.23 Logout Screen	50
A.24 Team View Screen	51
A.25 Mission Sended Screen	51
A.26 New Resquest Sended Screen	52
A.27 News Screen Filter Screen	52
A.28 Trace Screen	53
A.29 Login Screen	54
A.30 Forgot Password Screen	54
A.31 Administrator Main Screen	55
A.32 Administrator Add Screen	55
A.33 Administrator Update Screen	56
A.34 Logout Screen	56
A.35 Login Screen	58
A.36 Forgot Password Screen	58
A.37 Get Alert Screen	59
A.38 Home Screen	59
A.39 Lift Alert	60
A.40 Lift Alert Confirmation	60
A.41 Report Screen	61
A.42 Logout Screen	61
A.43 Overview 1 Screen	62
A.44 Mission Screen	62
A.45 Overview 2 Screen	63
A.46 Add Zone Screen	63

A.47 Set Zone Screen 64

A.48 Map Screen 64

A.49 Mission Send Screen 65

A.50 Setting Mission Screen 65

A.51 Setting Chackpoint Screen 66

A.52 Mission Update Screen 66

A.53 Access Denied 67

A.54 Internet Connection Missing 67

A.55 Mobile Connection Missing 68

A.56 Server Crash 68

Chapter 1

Product information

1.1 Identification

SHeavy® is a web based software developed by CrisYs Corp. whose goal is to prevent the spreading of epidemics but also to manage different organizations to handle epidemics in real time. s

1.2 Copyright

A copyright is an exclusive right granted to an author of a literary, musical, audiovisual or artistic work, giving the author the sole right to reproduce and distribute that work. There are several different types of copyrights which are associated with CrisYs Corp products. These include various copyrights in CrisYs Corp's software source code, executable code, product packaging, hardware and publications.

1.3 Trademark notices

Trademarks are the distinctive names, words, logos, designs and symbols used to distinguish our products or company. Some of our recognized trademarks include CrisYs Corp®, SHeavy®. The CrisYs Corp® trademark has been filed in many countries throughout the world and registrations have been issued in CrisYs Corp's name in many countries.

1.4 Restrictions

There are no restrictions on copying or distributing the software's associated documentation but the distribution of the software is only allowed over the buyer's network.

1.5 Warranties

SHeavy warrants for an entire lifetime following delivery of the Software that the Software will perform substantially in accordance with the user manual. Additionally SHeavy warrants also that our support is available 24h/24h and 7/7 days.

1.6 Contractual obligations

Having a function ready system. Maintain the web application deployed for each actor.

1.7 Disclaimers

SHeavy only shares instructions from trustful organizations and in no event will SHeavy or its distributors and their dealers be liable to you for any damages and any losts or incidental or consequential damage.

1.8 Contact

1.8.1 Online assistance

Visit the CrisYs Corp to get quick answers to your question or refer to our online support at <https://www.crisyscorp.com/support>. You can also get help and advices by contacting us on <https://www.crisyscorp.com/chat> or by contact@crisyscorp.com.

1.8.2 Telephone assistance

When you contact our support by telephone make sure that your problem is not already described on <https://www.crisyscorp.com/support>. Otherwise choose one of our callcenters.

CSC 1: 4884224179-85

CSC 2: 4884224179-86

More callcenters are available at <https://www.crisyscorp.com/callcenter>.

Chapter 2

General Information

2.1 Scope

SHeavy will only handle contagious and lethal epidemics. It is designed for worldwide use among governments, health organisations, hospitals and citizens. This document provides information about what the software is intended to do and how to use it. Furthermore it includes our web-interface only for professional users and the mobile interface for both, professional and normal users. This document does not contain any source code of the program and is not intended to help users reverse engineer our programs.

2.2 Purpose

This document is the user manual of the program SHeavy (v0.5) . It was realized to introduce our program and its features to its possible users. It defines which type of users have access to which functions and information of the program.

2.3 Intended audience

SHeavy is targeting governments, health organisations, hospitals or in general any type of users who could help in solving such a epidemic crisis. It can be technicians with computer science competences or higher level implied people like investors, governments or any other person with specific competences in a specific domain.

Furthermore SHeavy is also targeting people who aren't directly concerned with the management of a epidemic crisis but people who are interested in accessing information about the crisis. These persons are defined as normal users. In any moment they are going to interact with the management systems in order to send instructions or information except of their GPS locations.

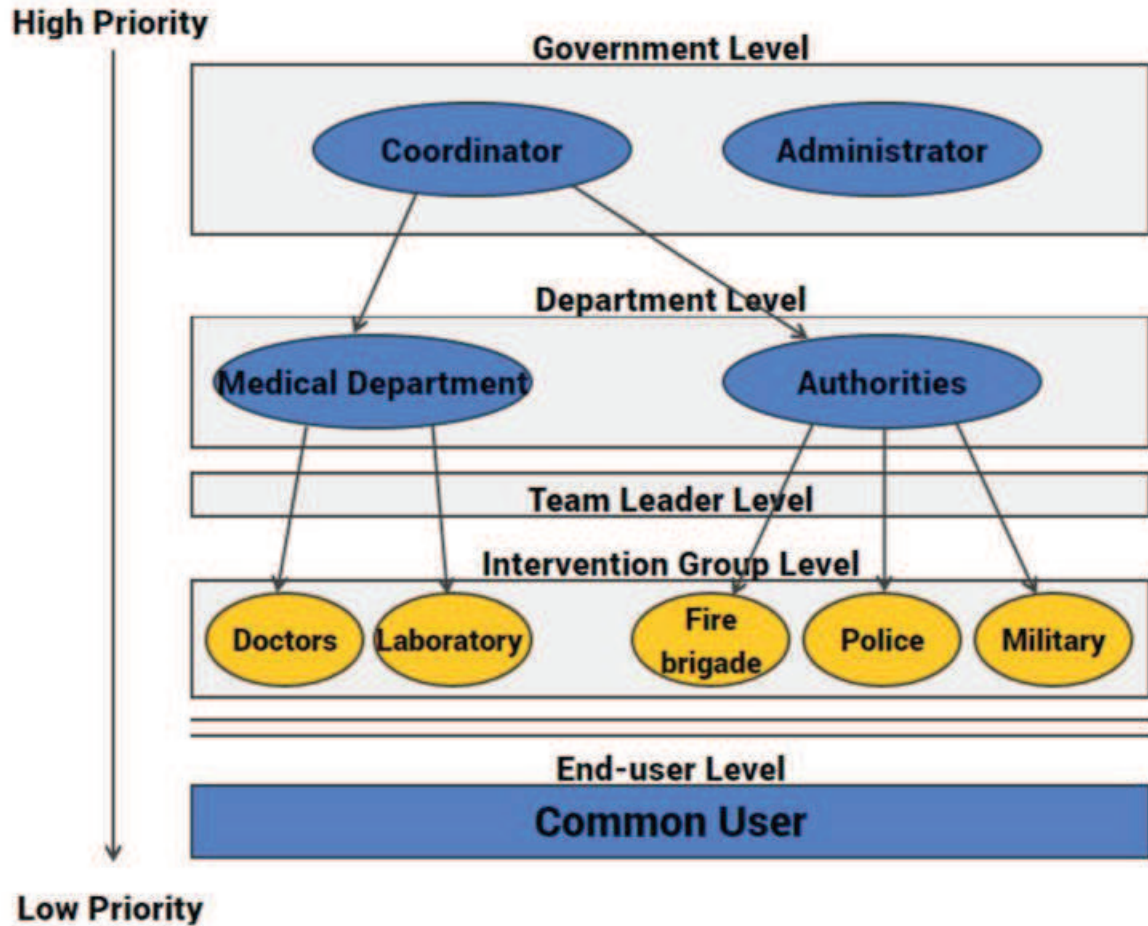
2.4 SHeavy

SHeavy is a software developed by CrisYs Corp whose goal is to predict and give advices to handle worldwide and lethal epidemics. It will analyse data shared by doctors around the world and deduce whether there is a beginning of epidemic. Predictions about its growth will be made and the relevant actors will be notified to take adequate measures to restrain that growth and treat it as soon as possible. The system will also keep logs

of all the communications and the actions carried out.

2.4.1 Actors & Functionalities

SHeavy has different functionalities for several Actors. For this purpose an hierachical chart is given below.



2.4.1.1 CrisYs Corp

CrisYs Corp are the developers of the crisis management system SHeavy.

- Create and set up the system.

2.4.1.2 Common Users

A common user is defined as an end user who uses SHeavy only in order to collect information about the possible epidemic and uses the given instructions to avoid the infection.

- Common users are the principle target of SHeavy. They are going to use the application in order to reach information about a possible or several epidemic and follow the instructions given by SHeavy.
- Common users will get warnings if accessing an infected zone by GPS tracking. They will have paths to follow to access and find the safe zones.

2.4.1.3 Coordinators

The Coordinator is the intermediate between its two low-level departments, Medical Department and Authorities, and the Government. He will execute the orders of the Government by using SHeavy. The Coordinator has several main functions such as :

- The Coordinator starts or beends the alert of the concerning epidemic.
- He's also responsible for the Ressources Management, which is already set up before the epidemic.
- Another task is to update SHeavy's Map accordingly to the situation.

2.4.1.4 Administrator

The Administrator is the responsible who keeps the system operational. Additionally he distributes the logins and the professional web and mobile interface.

- The Administrator keeps the system operational by maintaining the system.
- If necessary he performs some improvements and bugs corrections.
- The Administrator distributes the professional web and mobile interface to the concerned persons. and also the logins.
- The administrator is able to block a mobile phone or desktop interface for the security of the system.

2.4.1.5 Medical Department

The Medical Department has two main groups, namely Doctors and the Laboratory. Each one is connected with each other and they are exchanging their reports. The Medical Department is the intermediate between its groups and the Coordinator. They'll work together in order to find a cure. Furthermore they'll try to reduce the number of infected persons by delivering some guidelines to avoid being infected.

- Recognize a possible epidemic and report it to the Coordinator.
- Works in various check points or hospitals in order to perform check ups.
- Take care of the infected patients the time that an antivirus is found.
- Takes blood sample from the infected patients and analyze them in order to find a cure.
- Gives a guideline to the application as a news so that all the people knows how to protect itself from become infected.

2.4.1.6 Authorities

The Authorities is regrouping various intervention groups such as the fire brigade, the police and the militaries. They are working together and have a connection with each other. The Authorities are the intermediate between its groups and the Coordinator.

- Support group for various purposes.

2.4.1.7 Team Leader

Team Leader are present in all instances of Departments such as Medical Departments and Authorities. They are the leader of an intervention group which is going to execute missions given by the Coordinator. A Department consists of multiple team leader.

- They are responsible of his team.
- Accept or decline a mission given by the Coordinator.
- Execute missions.
- Reports the mission to the Coordinator.

2.4.2 Operating environment

SHEAVY is a webbased application. It has a server and a client side. The server needs to be powerfull to handle the mass of information. Clients need to have a good internet access and a basic system requirement to access fast their pages.

2.4.2.1 System requirements: Client

Phone Application	
<i>Android</i>	
OS	Android
Hardware	ARM 5 Dual Core
<i>iOS</i>	
Operating System	iOS 8
Hardware	iPhone 5

2.4.2.2 System requirements: Server

Server Application	
<i>Linux x86/x64</i>	
Kernel	4.8.1
Hard disk space	10 TB
Processeur	Intel Xeon E7-8893
RAM	32 GB

2.5 Document structure

You will find in chapter one all the necessary and general information to be properly introduced to the system we develop. Chapter two includes more detailed materials covering the main use-cases we implements, involving actors and basic technical details. Chapter three is set aside for more advanced readers, with technical skills particular to programming or at least understanding what it is about. For special notations and complex words please have a look at the glossary at the end of the document.

Chapter 3

Usage Guide

This section is aimed at describing the general use of the software. Such information is grouped by the different kinds of actors. Such actors are expected to use the software to perform some processes or workflows (called here procedures) using the concerned software (**including installation procedures**).

3.1 Actors common procedures

Common procedures to several actors are grouped in this section to avoid redundancy.

3.1.1 *Application Installation*

Use Case: ApplicationInstallation

Scope: Crisis Management System (*SHeavy*)

Primary Actor: Every user

Secondary Actor: None

Intention: Every single user who is going to use SHeavy on their mobile have to proceed the installation.

Level: Summary level

Main Success Scenario :

1. The user has to open 'Play Store' if the user uses an android device.
2. He has to search for SHeavy in the searchbar.
3. Then he as to confirm the installation by accepting the terms.
4. The application was installed succesfully and the user can start using the application.

Extensions:

- 1.a If the user uses an iOS device, he has to open the 'Apple store'.
-

3.1.2 *Find a Person*

Use Case: FindPerson

Scope: Crisis Management System (*SHeavy*)

Primary Actor: Every user

Secondary Actor: None

Intention: Find a person by name, by availability or by his functionality and call them.

Level: Sub-functional level

Main Success Scenario :

1. The user has to log in.
2. The user access to the contact Menu.
3. The user searches for the name or functionality or availability and get a list of matches.
4. The user can call or write a message to the specific user.

Extensions:

- 2.a. A common user get just access to the Call Centers lines.

3.1.3 Finding safe route

Use Case: FindSafe

Scope: Crisis Management System (*SHeavy*)

Primary Actor: System

Secondary Actor: Every User

Intention: Suggest the user the safest way to get to a safe place (e.g. hospital).

Level: Sub-functional level

Main Success Scenario :

1. The user has to log in.
2. The user access the SafePlaceFinder in the menu bar of the application.
3. The user select a place to go.
- 4 SHeavy calculates the fastest way avoiding Unsafe and Danger Zones.
5. The system opens the user's GPS application with the safest route.

Extensions:

- 4.a SHeavy ignores any way through an Unsafe/Danger Zone.
- 4.b SHeavy calculates the fastest way from the non-ignored ways.

3.2 Administrator procedures

3.2.1 Software Installation

Use Case: SoftwareInstallation

Scope: Crisis Management System (*SHeavy*)

Primary Actor: Administrator

Secondary Actor: Coordinator, Medical Departement, Authorities

Intention: The Administrator will install for the concerned, namely Coordinator, Medical Departement, Authorities, actors a software in their desktop.

Level: Summary level

Main Success Scenario :

1. The Administrator starts the installation of the software in the relevant desktops.
2. The Administrator will perfoms severals test runs.
3. The software is successfully installed.

Extensions:

- 2.a The test run fails and the administrator will repair it.

3.3 Coordinator procedures

3.3.1 Alert Management

Use Case: AlertManagement

Scope: Crisis Management System (*SHeavy*)

Primary Actor: Coordinator

Secondary Actor: Medical Departement

Intention: If a epidemic breaks out the Coordinator will trigger the alert which is the start signal to use the CMS to handle the crisis.

Level: Summary level

Main Success Scenario :

1. The Coordinator has to log in.
 2. The Medical Departement 'Trigger The Alert State'.
 3. The Coordinator 'Confirm The Alert State'.
 4. The Doctor 'Handling of infected patient'.
 5. The Coordinator 'Mission Management'.
 6. The Coordinator 'Lift The Alert State'.
 7. The epidemic is over.
-

3.3.2 Mission Management

Use Case: MissionManagement

Scope: Crisis Management System (*SHeavy*)

Primary Actor: Coordinator

Secondary Actor: Medical Departement, Authorities, Team leaders

Intention: The Coordinator requests a missions to be executed.

Level: User-goal level

Main Success Scenario :

1. The Coordinator 'Request Set Up Camp Mission'.
 - 2 All relevant Team leaders 'Accept Mission'.
 3. The Coordinator 'Accomplished Mission'.
- Extensions:
- 1.a. The Coordinator 'Request Set Up Checkpoint Mission'.
 - 1.b. The Coordinator 'Request Transfer Mission'.
 - 1.c. The Coordinator 'Request Evacuation Mission'.
-

3.3.3 Confirm The Alert State

Use Case: ConfirmAlert

Scope: Crisis Management System (*SHeavy*)

Primary Actor: Coordinator

Secondary Actor: Medical Departement

Intention: According to the diagnostic made by the Medical Departement, which will be sent to the Coordinator, the Coordinator will trigger the alert and SHeavy will notify all users about a possible epidemic.

Level: Sub-functional level

Main Success Scenario :

1. The Doctor notice that a patient is contracting an highly infectious virus.
2. The Doctor sends the report and blood samples to the Laboratory.
3. The Laboratory proceed to various tests with the blood samples.
4. If the risk of a possible epidemic is assessed, then the Doctor has to log in and he will send a to the Coordinator.
5. The Coordinstor recieves the report and trigger the alert of an epidemic.
6. The System will notify all relevant users about that.

Extensions:

- 4.a The tests shows their's no risk of epidemic and no report will be sent to the Coordinator.

3.3.4 Lift The Alert State

Use Case: LiftAlertState

Scope: Crisis Management System (*SHeavy*)

Primary Actor: Coordinator

Secondary Actor: Medical Departement

Intention: According to the diagnostic made by the Medical Departement, which is send to the Coordinator, the Coordinator will lift of the epidemic and SHeavy will notify all users that the epidemic is over.

Level: Sub-functional level

Main Success Scenario :

1. The Laboratory finds a cure for the epidemic.
2. All infected persons are healed.
3. The Medical Departement has to log in.
3. The Medical Departement sends a report to the Coordinator, in which it is said that the epidemic is over.
4. The Coordinator reads the report and according to that lifts the alert.
5. The System will notify to all relevant users that the epidemic is over.

3.3.5 Handling Ressources

Use Case: OverView

Scope: Crisis Management System (*SHeavy*)

Primary Actor: Coordinator

Secondary Actor: Medical Departement, Authorities

Intention: The Coordinator gets an overview of the infected zone, it's infrastructures and the deployed teams.

Level: Sub-functional level

Main Success Scenario :

1. The Coordinator has to log in.
2. The Coordinator access his webinterface.
3. The Coordinator clicks on OVERVIEW in the menu.

Extensions:

- 3.a. He can filter the information.

3.3.6 Request Set Up Camp Mission

Use Case: SetCampMission

Scope: Crisis Management System (*SHeavy*)

Primary Actor: Coordinator

Secondary Actor: Medical Departement, Authorities

Intention: The Coordinator send a request to setting up a camp to one or more teamleaders and his team members.

Level: Sub-functional level

Main Success Scenario :

1. The Coordinator has to log in as 'Coordinator-user'.
2. The Coordinator opens the 'Mission-view' in the menu of his webinterface.
3. The Coordinator chooses one or more team leaders.
4. The Coordinator writes the title of the mission.
5. The Coordinator writes where the camp will be set up in the Location Textfield.
6. The Coordinator enters a deadline by filling the date and time textfield.
7. The Coordinator writes the capacity of the camp.
8. The CoordinatorHe also writes the number of teams needed for this mission.
9. The Coordinator can also writes further information in the description area.
10. The Coordinator clicks on 'Send' to send the mission to the selected teams.
11. The System will notify the relevant Team leaders.

Extensions:

- 3.a The Coordinator can also select all team leaders.

3.3.7 Request Set Up Checkpoint Mission

Use Case: SetCheckpointMission

Scope: Crisis Management System (*SHeavy*)

Primary Actor: Coordinator

Secondary Actor: Medical Departement, Authorities

Intention: The Coordinator send a request to setting up a checkpoint to one or more teamleaders and his team members.

Level: Sub-functional level

Main Success Scenario :

1. The Coordinator has to log in as 'Coordinator-user'.
2. The Coordinator opens the 'Mission-view' in the menu of his webinterface.
3. The Coordinator chooses one or more teamleaders.
4. The Coordinator writes the title of the mission.
5. The Coordinator writes where the camp will be set up in the Location Textfield.
6. The Coordinator enters a deadline by filling the date and time textfield.
7. The Coordinator also writes the number of teams needed for this mission.
8. The Coordinator can also writes further information in the description area.
9. The Coordinator clicks on 'Send' to send the mission to the selected teams.
10. The System will notify the relevant Team leaders.

Extensions:

- 3.a The Coordinator can also select all team leaders.

3.3.8 Request Transfer Mission

Use Case: TransferMission

Scope: Crisis Management System (*SHeavy*)

Primary Actor: Coordinator

Secondary Actor: Medical Departement, Authorities

Intention: The Coordinator send a request to transfer people to one or more teamleaders and his team members.

Level: Sub-functional level

Main Success Scenario :

1. The Coordinator has to log in as 'Coordinator-user'.
 2. The Coordinator opens the 'Mission-view' in the menu of his webinterface.
 3. He chooses one or more teamleader.
 4. The Coordinator writes the title of the mission.
 5. The Coordinator decides where the person are going to be moved. According to that he needs to fills the from and to textfield.
 6. The Coordinator enters a deadline by filling the date and time textfield.
 7. The Coordinator writes the quantity of person to be moved.
 8. The Coordinator clicks on 'Send' to send the mission to the selected teams.
 9. The System will notify the relevant Team leaders.
- Extensions:
- 3.a The Coordinator can also select all team leaders.
-

3.3.9 Request Evacuation Mission

Use Case: EvacuationMission

Scope: Crisis Management System (*SHeavy*)

Primary Actor: Coordinator

Secondary Actor: Medical Departement, Authorities

Intention: The Coordinator send a request to evacuate an area to one or more teamleaders and his team members.

Level: Sub-functional level

Main Success Scenario :

1. The Coordinator has to log in as 'Coordinator-user'.
 2. The Coordinator opens the 'Mission-view' in the menu of his webinterface.
 3. The Coordinator chooses one or more teamleaders.
 4. The Coordinator writes the title of the mission.
 5. The Coordinator selects the kind of area in 'Type'.
 6. The Coordinator also fills the from and to Textfield to specificate from where to where the people should be moved.
 7. The Coordinator also writes an estimation of people to be moved.
 8. The Coordinator clicks on 'Send' to send the mission to the selected teams.
 9. The System will notify the relevant Team leaders.
- Extensions:
- 3.a The Coordinator can also select all team leaders.
-

3.3.10 Accomplished Mission

Use Case: AccomplishedMission

Scope: Crisis Management System (*SHeavy*)

Primary Actor: Coordinator

Secondary Actor: Team Leader

Intention: In order to keep an overview of all missions state, accomplished mission must be put on a finit state to reassign another mission later on to the team who acomplished the mission.

Level: User-goéal level

Main Success Scenario :

1. Team Leader 'Execute Mission'.
 2. The Coordinator recieves the report from the relevant team leader.
 3. The Coordinator states the mission as accomplished.
 4. The Team Leader and his team are available for other missions.
- Extensions:

- 3.a. The Coordinator states the mission as suspended.
-

3.3.11 Zone Management

Use Case: ZoneManagement

Scope: Crisis Management System (*SHeavy*)

Primary Actor: Coordinator

Secondary Actor: Laboratory

Intention: Updating the Map or adding new zone on the Map

Level: User-goal level

Main Success Scenario :

1. The Coordinator has to log in.
2. The Laboratory send reports to the Coordinator where new zone are needed.
3. The Coordinator 'Set Zone'.
4. If it is needed the Coordinator 'Mission Management'.

Extensions:

- 3.a. The Coordinator 'Change Zone State'.
 - 4.a. The Coordinator 'Change Zone State'.
-

3.3.12 Set Zone

Use Case: SetZone

Scope: Crisis Management System (*SHeavy*)

Primary Actor: Coordinator

Secondary Actor: Laboratory

Intention: Set up a safe camp or a quarantine zone.

Level: User-goal level

Main Success Scenario :

1. The Laboratory surveys the status of a zone.
 2. After the Laboratory confirms that a zone is safe or infected, the Coordinator is notified.
 3. The Coordinator will set a new camp and Sheavy will notify all the users automatically.
 4. The Coordinator will sent a request to the concerned intervention groups to set the camp.
-

3.3.13 Change Zone State

Use Case: ChangeZoneState

Scope: Crisis Management System (*SHeavy*)

Primary Actor: Coordinator

Secondary Actor: Laboratory

Intention: Change the state of an already set zone.

Level: Sub-functional level

Main Success Scenario :

1. The Laboratory surveys the status of a zone.

2. The Laboratory send futher reports to the Coordinator about the change of a zone.
 3. The Coordinator reads the reports and change the zone state and SHeavy will notify all the users.
-

3.4 Medical Departement procedures

3.4.1 Handling of infected patient

Use Case: HandlingOfInfectedPatient

Scope: Crisis Management System (*SHeavy*)

Primary Actor: Medical Departement

Secondary Actor: None

Intention: The Medical Department intends to update the application with the newest data about infected people, no matter what sickness they have. In case of a known epidemic infection, keep an updated record of the growth of the epidemic.

Level: Sub-functional level

Main Success Scenario :

1. The Doctor performs a medical check on a patient.
 2. The Doctor writes or updates data about the patient in his report.
 3. The Doctor sends the blood sample to the nearest laboratory in order to find a cure.
 4. The Doctor tries to stop the infection by performing several operations or by following the instruction of the Laboratory.
-

3.5 Team Leader procedures

3.5.1 Accept Mission

Use Case: AcceptMission

Scope: Crisis Management System (*SHeavy*)

Primary Actor: Team Leader

Secondary Actor: Coordinator

Intention: The Teamleader accepts or declines a mission.

Level: Sub-functional level

Main Success Scenario :

1. The Teamleader gets a notification on his mobile application about the 'Set Up Camp' mission.
 2. The Teamleader accept or decline the mission.
- Extensions:
- 1.a. Teamleader gets a notification on his mobile application about the 'Set Up Checkpoint' mission.
 - 1.a. Teamleader gets a notification on his mobile application about the 'Transfer' mission.
 - 1.a. Teamleader gets a notification on his mobile application about the 'Evacuate' mission.
 - 2.a. If accepted the mission will be sent to his team members.
 - 2.b. If declined the mission will be affected to another team.
-

3.5.2 Execute Mission

Use Case: ExecuteMission

Scope: Crisis Management System (*SHeavy*)

Primary Actor: Team Leader

Secondary Actor: Coordinator

Intention: The Teamleader and his team execute the mission.

Level: Sub-functional level

Main Success Scenario :

1. The Team executes the 'Set Up Camp' mission.
2. The Team leader notifies the Coordinator that the mission was successfully. executed.

Extensions:

- 1.a. The Team executes the 'Set Up Checkpoint' mission.
 - 1.b. The Team executes the 'Transfer' mission.
 - 1.c. The Team executes the 'Evacuation' mission.
-

Chapter 4

Software operations

This chapter explains each allowed software operations (i.e. an atomic unit of treatment, a service, a functionality) including a brief description of the operation, required parameters, optional parameters, default options, required steps to trigger the operation, assumptions upon request of the operation and expected results of executing such operation. It describes how to recognise that the operation has successfully been executed or abnormally terminated.

4.1 Login

The coordinator, administrator, leaders or anyone working in the medical department or authorities who wants to access the applications.

Parameters: User Information, User Password

Precondition: The user has the application open and has already his credentials.

Post-condition: The user enters the homescreen with access to his individual information and functions.

Output messages: 'Login successfully'

Triggering:

1. After opening the application the user has two textfields for account and password [A.10](#).
2. The user enters his account and his password.
3. Click on the 'Login' button and the user will be linked to the homescreen.

4.2 Logout

The coordinator, administrator, leaders or anyone working in the medical department or authorities who wants to quit the applications.

Parameters: User Information, User Password

Precondition: The user is already logged in.

Post-condition: The user can't no longer access to his personal functions proposed by SHeavy.

Output messages: 'Logout successfully'

Triggering:

1. The user is logged in.
2. The user clicks on 'Logout' at the corner of the application. [A.23](#)
3. The user has to confirm it again.
4. The user isn't no longer logged in.

4.3 Insertion Into Database

In request of the coordinator, the Administrator adds a person as a common user or a professional user to the system, allowing them to use the specific operation each type of user has.

Parameters: Personal Information, User Information, Coordinator Request

Precondition: The crisis didn't has started and the administrator is logged in. Furthermore, the person who the administrator is going to add don't has an existing account.

Post-condition: The selected user gains access to the specific feature of the system each type of user has.

Output messages: The user has been added to the system.

Triggering:

1. The administrator clicks on 'Add User' that opens the Add-User-Interface [A.46](#).
2. The administrator fills in the Personal Information: Title, First Name, Last Name, Phone Number, E-mail.
3. The administrator fills in the requested type of professional from the following: Common User, Medical Department, Authorities and Coordinator.
4. The administrator selects his subtype for the Medical Department and Authorities but not for the Common user and Coordinator.
5. The administrator enters the Users Team.
6. Finally, the administrator clicks on 'Add User'.

4.4 Trigger Alert

The Medical Departement creates an alert message for an epidemic, including a report of what happened and what should be done as a reaction of that epidemic. He's sending it to the Coordinator who will read it and confirm the alert state.

Parameters: Alert Information, User and State Information

Precondition: The user is logged in as professional user such as Medical Departement.

Post-condition: The alert was successfully sent and the Coordinator was notified about the alert.

Output messages: 'Alert sent'.

Triggering:

1. In the alert message window, the professional user fills out the alert information: the title and the description text-fields.
2. The message has to have an report as well as indicating the state of the alert if needed.
3. Click on the 'Send' button and the Coordinator will be notified of the epidemic.

4.5 Confirm Alert

The Coordinator recieves an alert message from the Medical Departement including a report about the severity of the epidemic. The Coordinator will read it and will confirm the alert and notify every user about the epidemic.

Parameters: Alert Information, User and State Information

Precondition: The user is logged in as professional user and has already read the report.

Post-condition: Start of the CMS. The alert is confirmed and every user is notified about he epidemic.

Output messages: 'Epidemic confirmed'.

Triggering:

1. The Coordinator recieves an alert notification on his web-interface [A.37](#). He has to click on 'Open' to read the report sent by the Medical Departement.

2. The Coordinator clicks on 'Launch Crisis'[A.41](#). to start the crisis.
3. The Coordinator clicks on 'Delay Decision'[A.41](#). to responde later.
4. The Coordinator clicks on 'Decline'[A.41](#). if there's no sign of a dangerous epidemic.

4.6 Lift Alert

The Coordinator recieves the confirmation that the cure was fund and is working. The infected persons are reducing rapidly. Only few minoor victims are left but the normal cycle of life can flow again. The Coordinator Lift the Alert because the alert is over.

Parameters: Alert Information, User and State Information

Precondition: The user is logged in as professional user and a crisis is on going.

Post-condition: End of the CMS. The alert is lifted.

Output messages: 'Epidemic over'.

Triggering:

1. The Coordinator recieves a notification on his web-interface. from the Medical Departement. He has to click on 'Open' to read the report sent by the Medical Departement.
2. The Coordinator konws that the epidemic is over. He clicks on 'Finish Crisis' located in the 'Home Screen'[A.38](#).
3. The Coordinator clicks on 'Stop the Crisis'[A.39](#).
4. The Coordinator has to confirm his decision and has to click again on 'Stop the Crisis'[A.40](#).
5. The Alert is lifted and the CMS will be deactivated.

4.7 Delete User

In request of the coordinator, the Administrator wants to delete a user.

Parameters: User name, Coordinator Request

Precondition: The administrator has to be on his home screen.

Post-condition: The selected user will be deleted from the database.

Output messages: 'User deleted'

Triggering:

1. The administrator selects or uses the search to find and select the requested user.
2. The administrator clicks on 'Delete User'[A.33](#) to finish the operation.
3. The user was successfully removed from the database.

4.8 Safe Place Finder

Any user requests the safest and fastest way to a certain safe place e.g. hospital, safe camp. The operation will send him through GPS to the selected place.

Parameters: Place Information, Place Location

Precondition: The crisis is on going. The user is logged in and has his GPS enabled.

Post-condition: The fastest way to a certain safe place was calculated.

Output messages: 'Route to the selected safe place is ready.'

Triggering:

1. In the menu the user clicks on 'Safe Place Finder'[A.22](#).

2. A new window shows a list of safe places and the user choses one by clicking on the one the user wants to request the route and send the Place Information to SHeavy.
3. SHeavy send back the Place Location which includes the actual location as well as the safest route.
4. The user is lead to the GPS window.

4.9 Find Person

Any professional user who requests a call to a specific group in a certain location. Can find them by selecting them in the contact list or using the search to find the group (medics, fireman, military) by name or location (e.g. hospital/camp name or city they are located).

Parameters: Contact Information

Precondition: The user is logged in and has to be connected to a network. The crisis has already started.

Post-condition: The application uses call the respective group or person.

Output messages: Calling 'ContactX'

Triggering:

1. Open the 'Contacts'-menu [A.15](#).
2. Searches for the person to call.

4.10 Send Mission Set Camp

The Coordinator sends set camp mission to various groups leaders (e.g. fire figther, military, Doctors,..) with some important information concerning the mission.

Parameters: Contact Information, Mission Information

Precondition: The user is logged in as a professional user. The crisis has already started.

Post-condition: The mission is recieved by the concerned leader.

Output messages: 'Mission Pending'

Triggering:

1. The Coordinator opens the 'Mission-view' [A.50](#).
2. Select one or more teams by selecting a leader in the 'send to' field or sends to all by clicking on 'Send to All'.
3. Writes the title and select 'Set Camp' as type by clicking on 'Set Type'.
4. Give the Location of the camp and also announce a deadline in format Date and time.
5. Furthermore indicates de capacity of the camp and how many teams are needed there.
6. Fill the description for more details about the mission.
7. Click on the 'Send'-Button to submit the mission.

4.11 Send Mission Set Checkpoint

The Coordinator sends set checkpoint mission to various groups leaders (e.g. fire figther, military, Doctors,..) with some important information concerning the mission.

Parameters: Contact Information, Mission Information

Precondition: The user is logged in as a professional user. The crisis has already started.

Post-condition: The mission is recieved by the concerned leader.

Output messages: 'Mission Pending'

Triggering:

1. The Coordinator opens the 'Mission-view'[A.50](#).
2. Select one or more teams by selecting a leader in the 'send to' field or sends to all by clicking on 'Send to All'.
3. Writes the title and select 'Set Checkpoint' as type by clicking on 'Set Type'.
4. Give the Location of the camp and also announce a deadline in format Date and time.
5. Furthermore indicates how many teams are needed there and where victims are going to be moved.
6. Fill the description for more details about the mission.
7. Click on the 'Send'-Button to submit the mission.

4.12 Send Mission Transfer

The Coordinator sends transfer mission to various groups leaders (e.g. fire fighter, military, Doctors,...) with some important information concerning the mission.

Parameters: Contact Information, Mission Information

Precondition: The user is logged in as a professional user. The crisis has already started.

Post-condition: The mission is recieved by the concerned leader.

Output messages: 'Mission Pending'

Triggering:

1. The Coordinator opens the 'Mission-view'[A.50](#).
2. Select one or more teams by selecting a leader in the 'send to' field or sends to all by clicking on 'Send to All'.
3. Writes the title and select 'Transfer People' as type by clicking on 'Set Type'.
4. Give the Locations from where to where people are going to be moved.
5. Announce a deadline in format Date and time and how many people are going to be moved.
6. Click on the 'Send'-Button to submit the mission.

4.13 Send Mission Evacuation

The Coordinator sends evacuation mission to various groups leaders (e.g. fire fighter, military, Doctors,...) with some important information concerning the mission.

Parameters: Contact Information, Mission Information

Precondition: The user is logged in as a professional user. The crisis has already started.

Post-condition: The mission is recieved by the concerned leader.

Output messages: 'Mission Pending'

Triggering:

1. The Coordinator opens the 'Mission-view'[A.50](#).
2. Select one or more teams by selecting a leader in the 'send to' field or sends to all by clicking on 'Send to All'.
3. Writes the title and select 'Evacuate' as type by clicking on 'Set Type'.
4. Give the Locations from where to where people are going to be evacuate.
5. Indicate an estimated number of people to be rescued but can be changed lately.
6. Click on the 'Send'-Button to submit the mission.

4.14 Accept Mission

Each group member can receive a mission from the Coordinator. But only the leader can accept the mission.

Parameters: Contact Information, Mission Information

Precondition: The user is logged in as a professional user and receives the mission notification. The crisis has already started. The maximum number of team needed in the mission doesn't exceed the demand. And the Deadline isn't reached.

Post-condition: The mission will be executed.

Output messages: 'Mission Accepted'

Triggering:

1. The team leader receives a mission [A.18](#).
2. He can click on 'Details' to get further information or decline immediately.
3. By clicking on 'Extras' he gets information about other teams present in the mission zone.
4. The Team leader clicks on 'Accept'.
5. After accepting the mission he gets a confirmation notification. He can quit it by clicking on 'OK'.

4.15 Decline Mission

Each group member can receive a mission from the Coordinator. But only the leader can decline it if they can't execute it.

Parameters: Contact Information, Mission Information

Precondition: The user is logged in as a professional user and receives the mission notification. The crisis has already started. The maximum number of team needed in the mission doesn't exceed the demand. And the Deadline isn't reached.

Post-condition: The mission will be sent to another team.

Output messages: 'Mission Declined'.

Triggering:

1. The team leader receives a mission [A.52](#).
2. He can click on 'Details' to get further information or decline immediately.
3. By clicking on 'Extras' he gets information about other teams present in the mission zone.
4. The Team Leader clicks on 'Decline'
5. After accepting the mission he gets a confirmation notification. He can quit it by clicking on 'OK'.

4.16 Add Zone

The Coordinator can add new zones to the map. According to that the map will be updated.

Parameters: Epidemic Information, Change State

Precondition: The user is logged in as a professional user. The crisis has already started. The zone to add doesn't exist.

Post-condition: A new zone was added to the map.

Output messages: 'Updated'

Triggering:

1. The Coordinator opens the 'Map Editor-view' [A.46](#).
2. He has to click on the 'Add Zone' label to add a new Zone.
3. He has to select a Type of zone by clicking on 'Choose Type'.
4. The Coordinator selects the visibility type.

5. Set the area by given an estimation of the height and width in km.
6. At last select the Location where the area will be set.
7. Click on the 'Add Zone'-Button to submit the modifications on the map.

4.17 Change Zone

The Coordinator can change a zone's proprieties in any time. According to that the map will be updated.

Parameters: Epidemic Information, Change State

Precondition: The user is logged in as a professional user. The crisis has already started. The relevant zone exists.

Post-condition: An existing zone was modified on the map.

Output messages: 'Updated'

Triggering:

1. The Coordinator opens the 'Map Editor-view'[A.47](#).
2. He has to click on the 'Set Zone' label to change a Zone.
3. At first he has to select the zone by clicking on 'Select a Zone' button or searches for the name of the zone.
4. He can modify the zone's proprieties.
5. Click on the 'Safe Changes' to submit the modifications on the map or click on 'Cancel Changes' to cancel the modification.

4.18 Delete Zone

The Coordinator can delete a zone in any time. According to that the map will be updated.

Parameters: Epidemic Information, Change State

Precondition: The user is logged in as a professional user. The crisis has already started. The Zone exists.

Post-condition: An existing zone was deleted on the map.

Output messages: 'Updated'

Triggering:

1. The Coordinator opens the 'Map Editor-view'[A.47](#).
2. He has to click on the 'Set Zone' label to change a zone.
3. At first he has to select the zone by clicking on 'Select a Zone' button or searches for the name of the zone.
4. Click on the 'Delete Zone' button to delete the zone or click on the 'Cancel Change' button to quit.

4.19 Alert GPS Zone

The System alerts the user if he's entering in a zone such as a dangerous zone or quarantine zone. The System has to know where the user is. For this purpose the application sends the GPS location to the system several times.

Parameters: GPS Locations, Zones in the Map

Precondition: The user is logged in and the crisis has already started. The user has his GPS enabled and is operational.

Post-condition: The user knows he's nearby a zone and can avoid it. The applications has sent the user's GPS location to the System.

Output messages: 'You are entering in a Danger Zone'

Triggering:

1. The Application sends the GPS Location to the System several times per 5 minutes range.
2. The System knows locally where's the danger zones and so warns the user when entering in a Zone.
3. When entering in a Zone a Warning will pop up and you have the choice to enable the mute again.

4.20 Forgot Password

It might be that the a professional user can't remember his credentials anymore. He has the possibility to get new credentials from the administrator.

Parameters: Email associated to the account

Precondition: The user's email is associated with his lost account.

Post-condition: The user gets new credentials in his mail.

Output messages: 'Reset credentials was sent by email to your email.'

Triggering:

1. The professional user has to click on 'Forgot your password?' on the Login Screen [A.35](#).
2. The professional user has to write his email in the textfield [A.36](#).
3. The professional user clicks on 'Send' to get his new credentials.

4.21 Send Exact Amount of People

The Coordinator sends missions normally with an estimation of people to evacuate or transfer. After the mission the Team leader who accepted the mission can send the exact amount of people to the Coordinator

Parameters: Amount of People , Type of Mission

Precondition: The user is logged in as a professional user. The crisis has already started. The Team Leader accepted the mission and will execute it. Afterwards the teamleader send the amount of people to save.

Post-condition: The right amount was sent and modified.

Output messages: 'Changes submitted'

Triggering:

1. The Team Leader has to open the 'Mission-view'[A.18](#).
2. The Team Leader has to select the current mission.
3. The Team Leader can modify the amount of people.
4. The Team Leader has to click on 'Send'[A.25](#) to send the right amount to the Coordinator.

4.22 Get All Zones

The Application retrieves a Collection of zones from the System to get all zones locally stored.

Parameters: None

Precondition: The System needs an internet connection and the crisis has already started.

Post-condition: All zones are represented on the map.

Output messages: None

Triggering:

1. The user has to open the 'Map-view'[A.21](#).
2. The Application will retrieve all zones automatically.
3. All Zones are represented in the map.

4.23 See Affected Team to Mission

The Coordinator wants to see which teams are linked with which mission.

Parameters: Missions

Precondition: The user is logged in and the crisis has already started. There are some mission in going and teams affected to it.

Post-condition: Teams linked with the selected Mission are shown.

Output messages: None

Triggering:

1. The Coordinator opens the 'Overview-screen'[A.45](#).
2. The Coordinator clicks on 'Mission'.
3. A list with all relevant information will appear next the map.

Chapter 5

Error messages and problem resolutions

All known problems in using the software should be listed and explained in details using the structure presented below.

Contact information for reporting any problems (either with the software or this document) should be clearly indicated

5.1 No Mobile Network

5.1.1 Problem identification

Impossible to refresh or to get the latest news or notifications.

Impossible to opens some features of the application.

(see reference [A.55](#))

5.1.2 Probable cause

The user may have put the device in flight mode, has no Wifi or is out of the router's range or no mobile connection. It may be that the main server isn't operational any more or a misfunction from your ISP. The router can also be turned off.

5.1.3 Corrective actions

- The user may reduce the range between the router and the mobile phone.
- Contact your Internet service provider.
- Go to the Settings menu, disable the 'Flight mode' option.
- Go to the Settings menu, enable the 'Mobile data' option.
- Go to the Settings menu, enable the 'Wifi' option.
- Wait until the main server is operational again.

5.2 No Internet Network

5.2.1 *Problem identification*

Impossible to refresh or to get the latest news or notifications.
Impossible to opens some features of the application nor send information.
(see reference [A.54](#))

5.2.2 *Probable cause*

The user may have put the device in flight mode, has no Wifi or is out of the router's range or no ethernet connection. It may be that the main server isn't operational any more or a misfunction from your ISP. The router can also be turned off.

5.2.3 *Corrective actions*

- The user may reduce the range between the router and the computer.
- Turn on the router.
- Contact your Internet service provider.
- Go to the Settings menu, disable the 'Flight mode' option.
- Go to the Settings menu, enable the 'Wifi' option.
- Wait until the main server is operational again.

5.3 Server down

5.3.1 *Problem identification*

Impossible to open the application nor to work on it. The application is not responding.
(see reference [A.56](#))

5.3.2 *Probable cause*

The server is down or the user has a falsely configured device.

5.3.3 *Corrective actions*

- Wait until the operation has finished.
- Go to the Settings menu, choose the option 'Server settings' and click on 'Repair server'.

5.4 Access denied

5.4.1 Problem identification

The user can't sign in.
(see reference [A.53](#))

5.4.2 Probable cause

The user is given the wrong credentials.

5.4.3 Corrective actions

- Disable 'Caps locks'
- Restore his credentials by sending an email to the administrator.

Appendix A

Referenced Illustrations

A.1 Screen Graphs

A.1.1 Application Screens

A.1.1.1 Common User

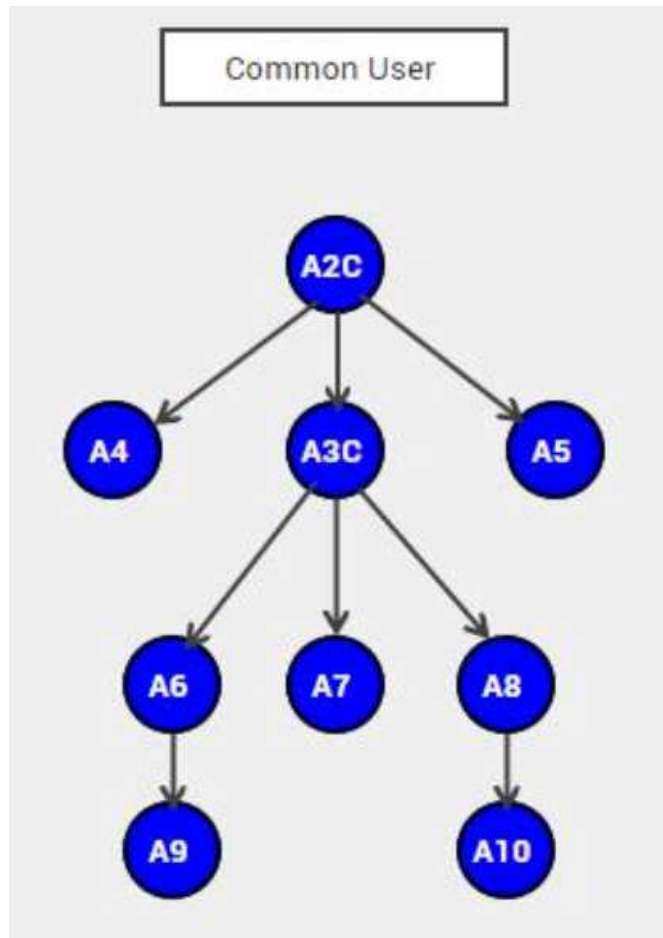


Fig. A.1 Home Screen**Fig. A.2** Alert Screen

Fig. A.3 Contact Screen

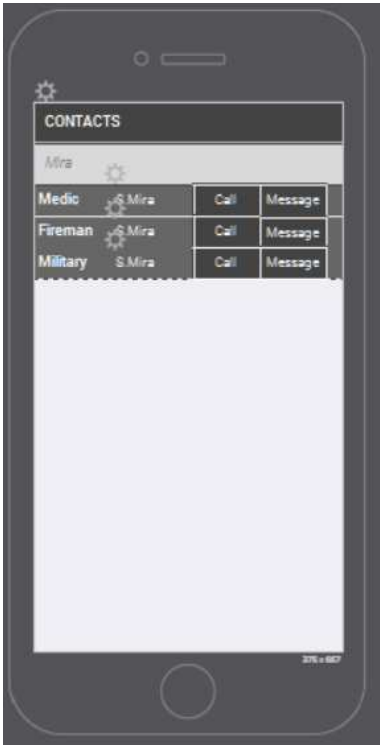


Fig. A.4 Menu Screen



Fig. A.7 Safe Place Finder Screen

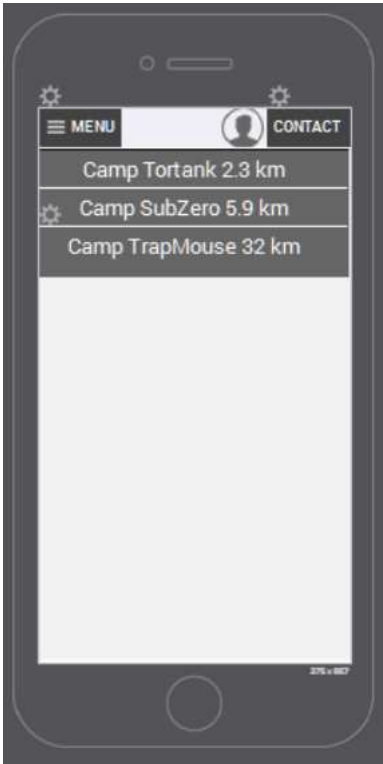
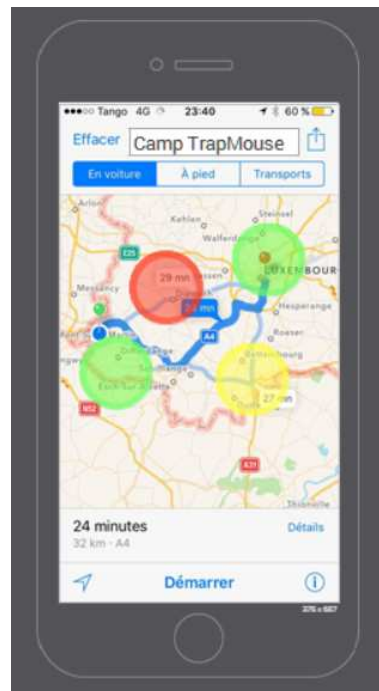


Fig. A.8 News Filter Screen



Fig. A.9 Trace Screen

A.1.1.2 Professional User

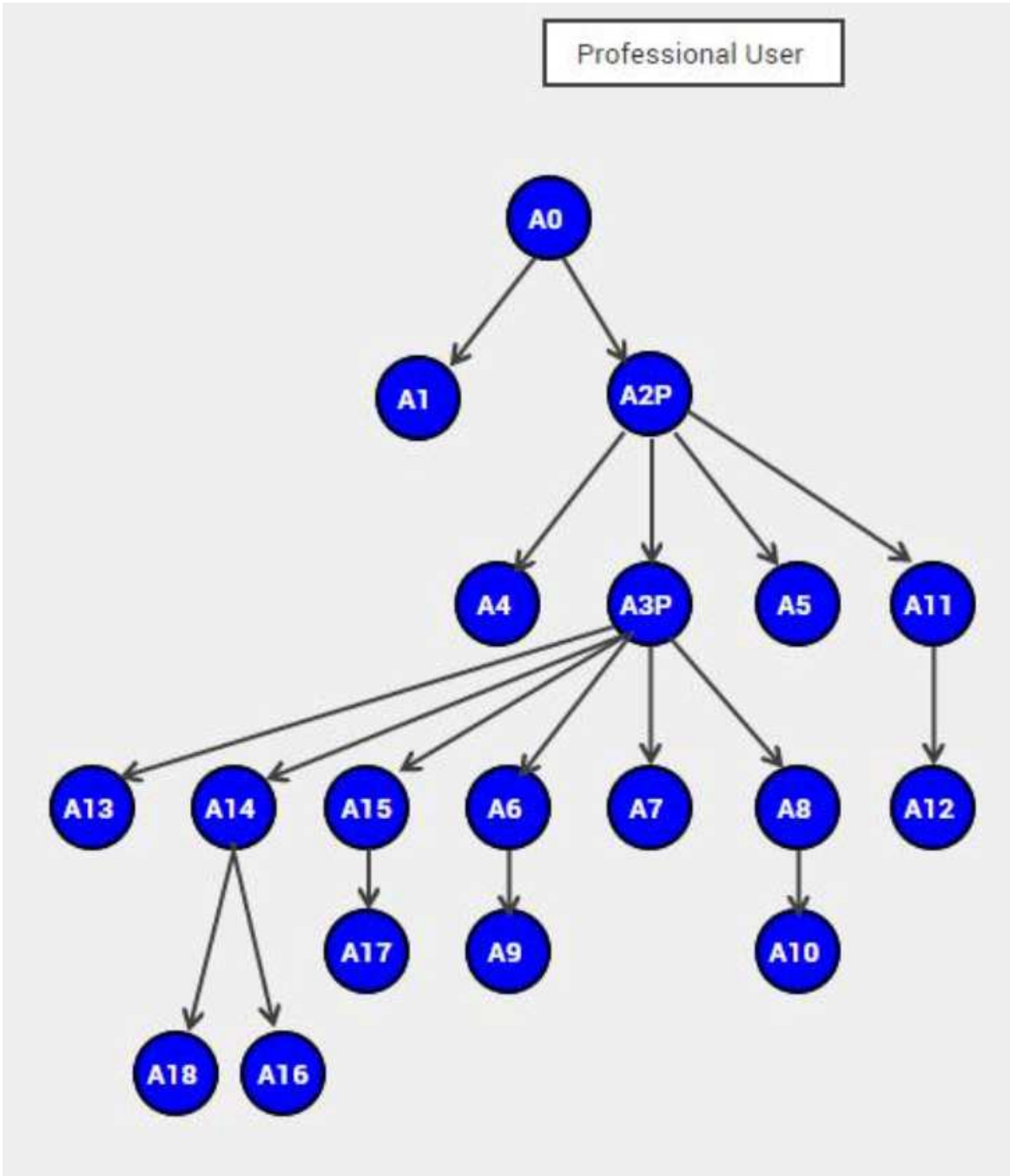


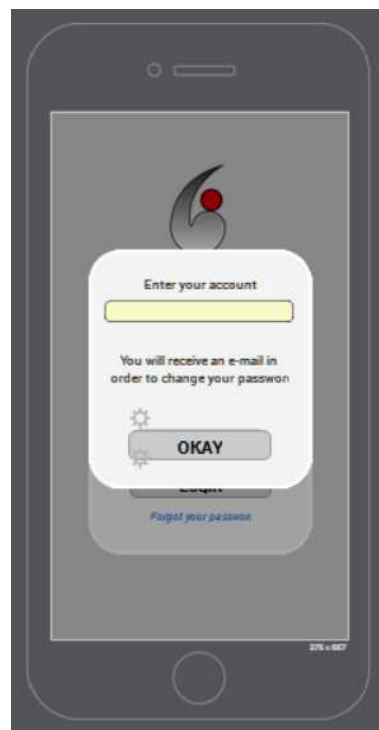
Fig. A.10 Login Screen**Fig. A.11** Forgot Password Screen

Fig. A.12 Home Screen



Fig. A.13 Alert Screen



Fig. A.14 Menu Screen



Fig. A.15 Contact Screen

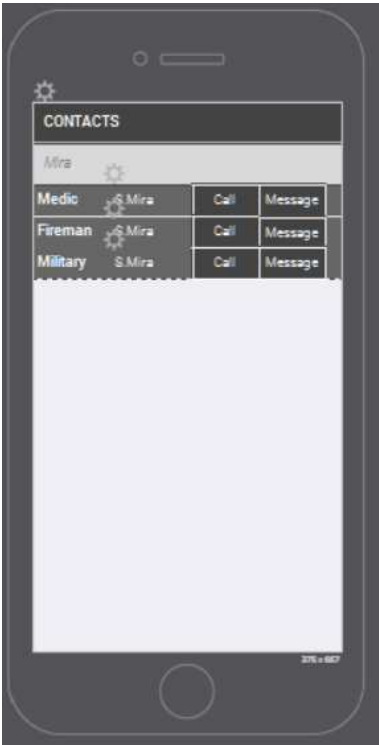


Fig. A.16 Account Screen



Fig. A.17 Start Mission Screen



Fig. A.18 Mission Screen



Fig. A.19 New Request Screen



Fig. A.20 News Screen

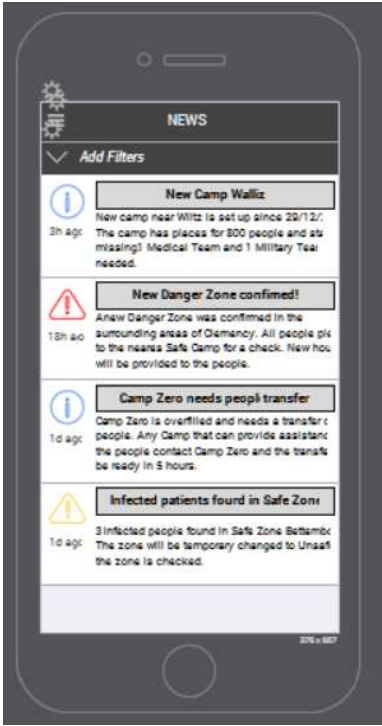


Fig. A.21 Map Screen



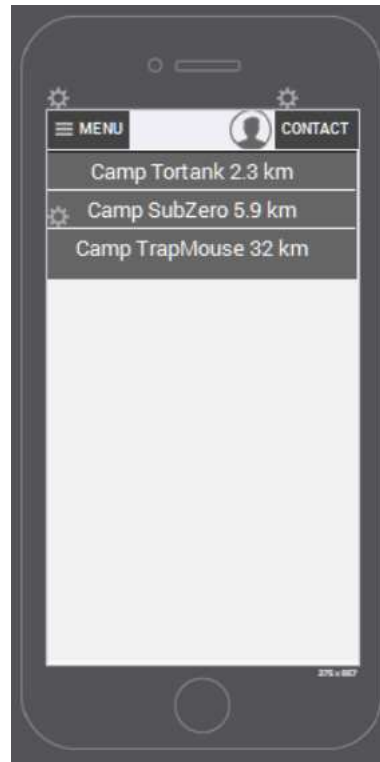
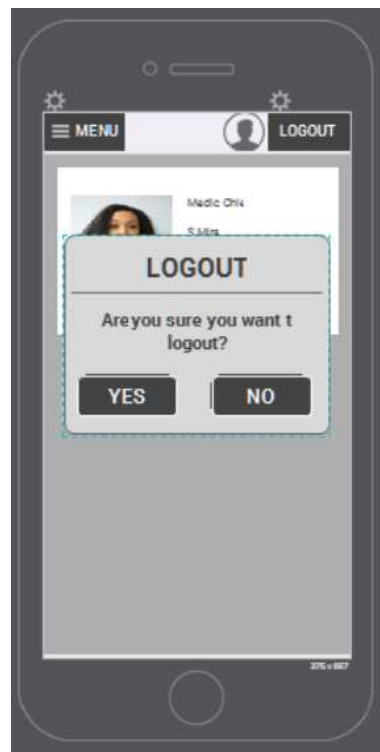
Fig. A.22 Safe Place Finder Screen**Fig. A.23** Logout Screen

Fig. A.24 Team View Screen

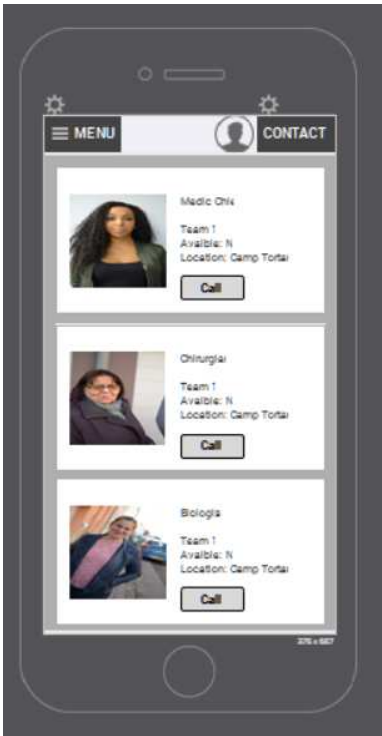


Fig. A.25 Mission Sended Screen



Fig. A.26 New Request Sended Screen

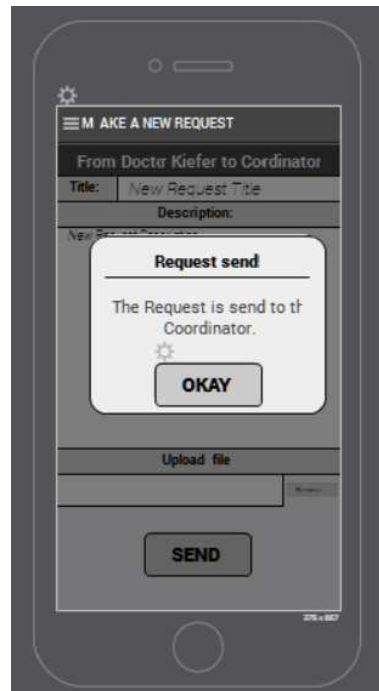


Fig. A.27 News Screen Filter Screen

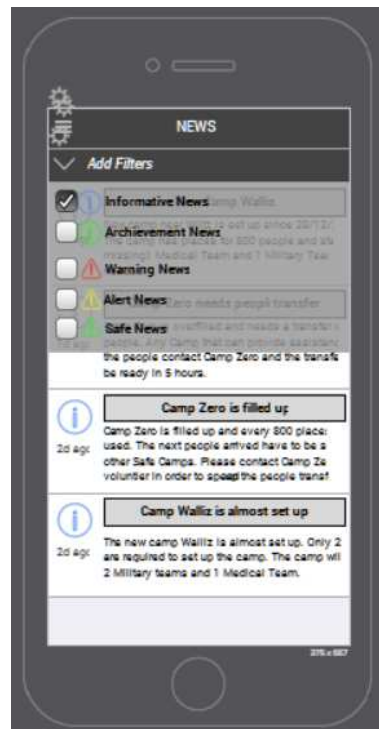
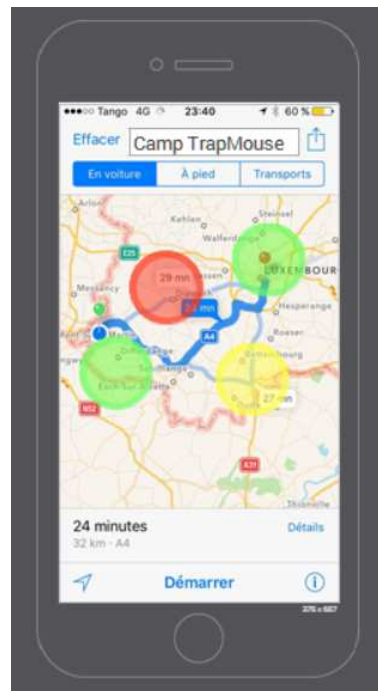


Fig. A.28 Trace Screen

A.1.2 Web Screens

A.1.2.1 Administrator

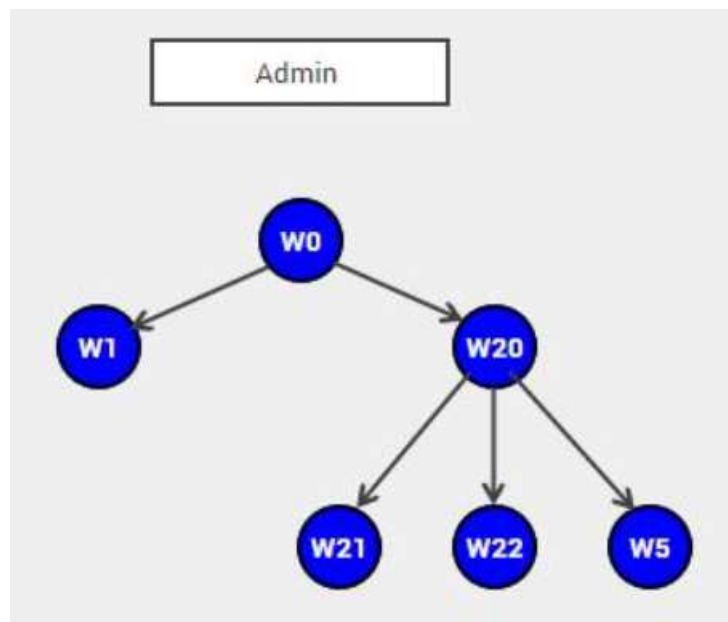
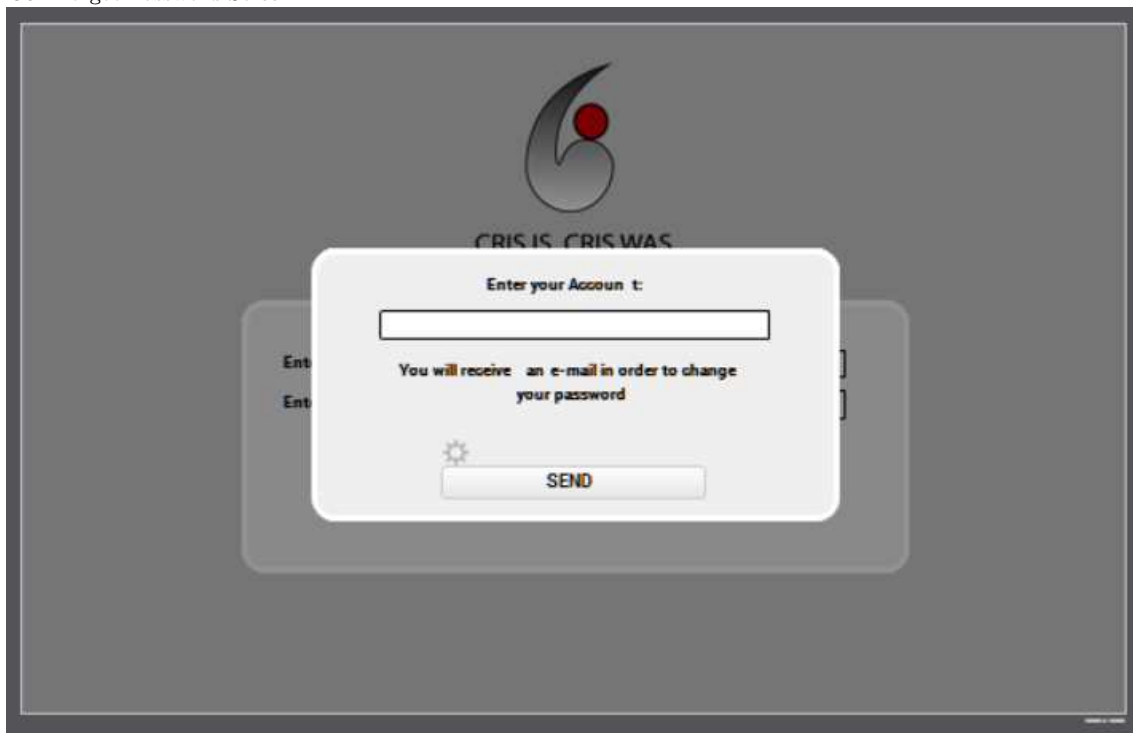


Fig. A.29 Login Screen



The login screen features a light gray background. At the top center is a logo consisting of a stylized gray 'C' with a red dot inside. Below the logo is the text "CRIS IS. CRIS WAS." in a bold, sans-serif font. In the center of the screen is a white rounded rectangle containing the login form. The form has two input fields: "Enter your Login:" and "Enter your Password:". Below the password field is a blue link that says "Forgot your Password?". At the bottom of the white rectangle is a "LOGIN" button.

Fig. A.30 Forgot Password Screen



The forgot password screen has a dark gray background. At the top center is the same logo as the login screen. Below it is the text "CRIS IS. CRIS WAS." in a bold, sans-serif font. In the center is a white rounded rectangle containing the forgot password form. The form has a single input field labeled "Enter your Account:". Below the input field is the text "You will receive an e-mail in order to change your password". At the bottom of the white rectangle is a "SEND" button with a small gear icon to its left.

Fig. A.31 Administrator Main Screen

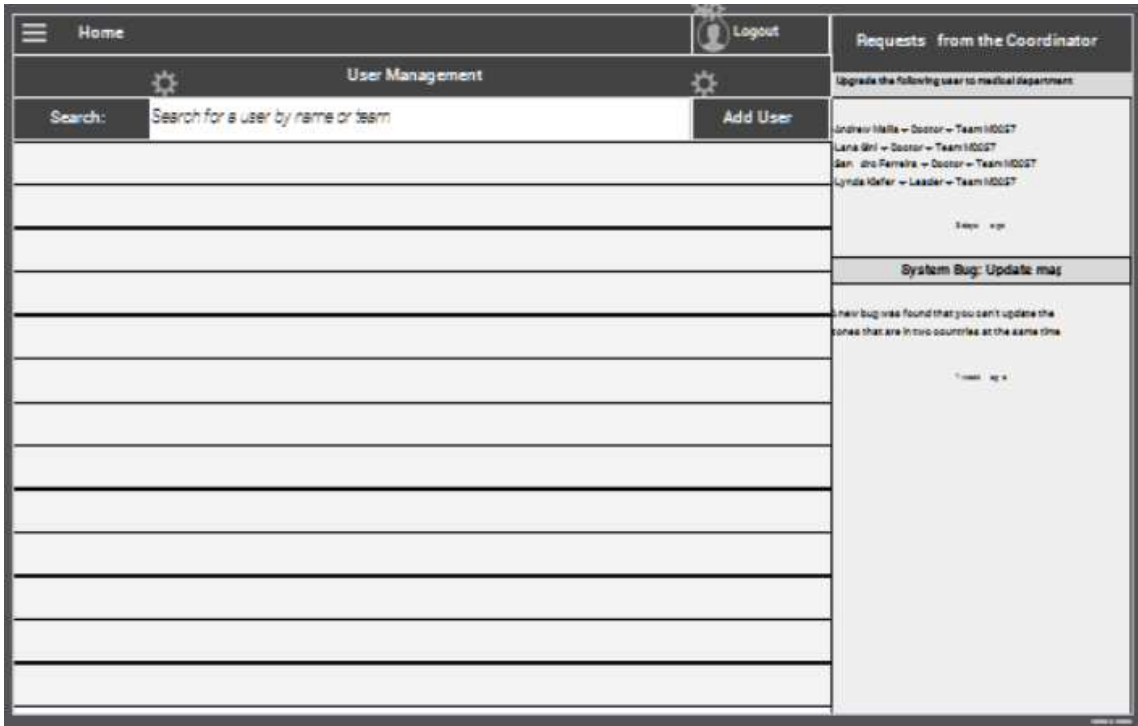


Fig. A.32 Administrator Add Screen

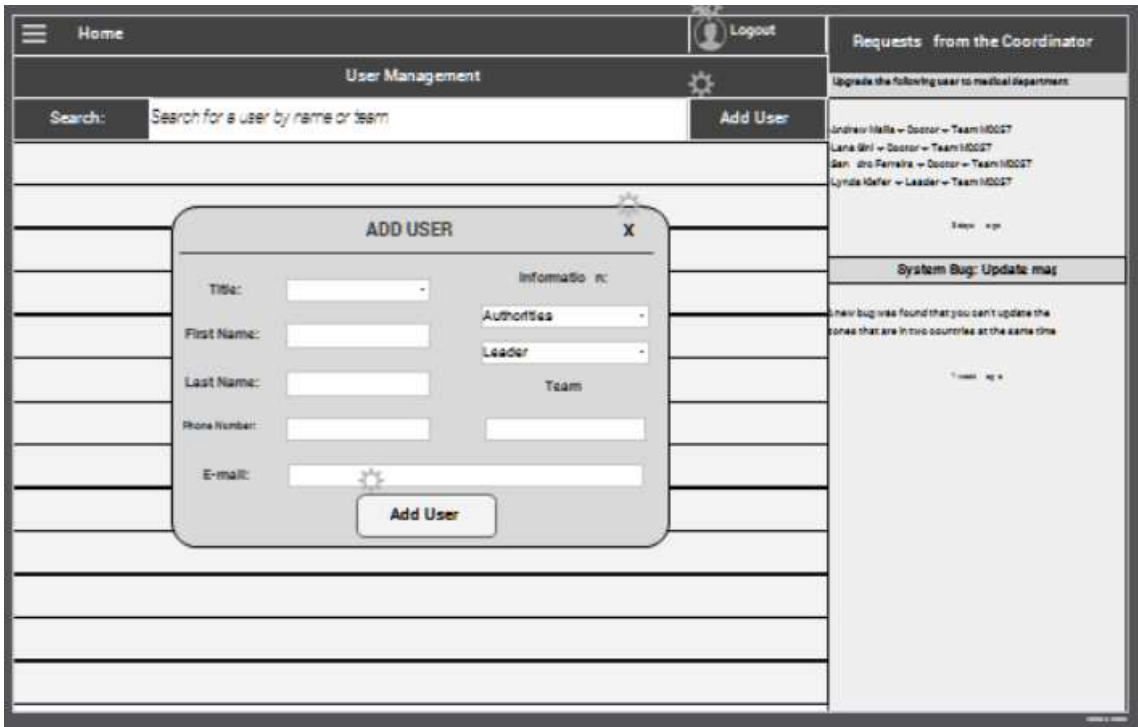


Fig. A.33 Administrator Update Screen

Home Logout

User Management

Search: Andrew Mallis Add User

Mr. Andrew Mallis Medical Department Doctor Team: Reset User Delete User

Name	Medical Department	Doctor	Team	Reset User	Delete User
Andrew Mallis	Doctor	Team	MD027		
Lara Gini	Doctor	Team	MD027		
Ben, also Ferreira	Doctor	Team	MD027		
Lynda Kiefer	Leader	Team	MD027		

System Bug: Update map

There has been a bug found that you can't update the zones that are in two countries at the same time

Fig. A.34 Logout Screen

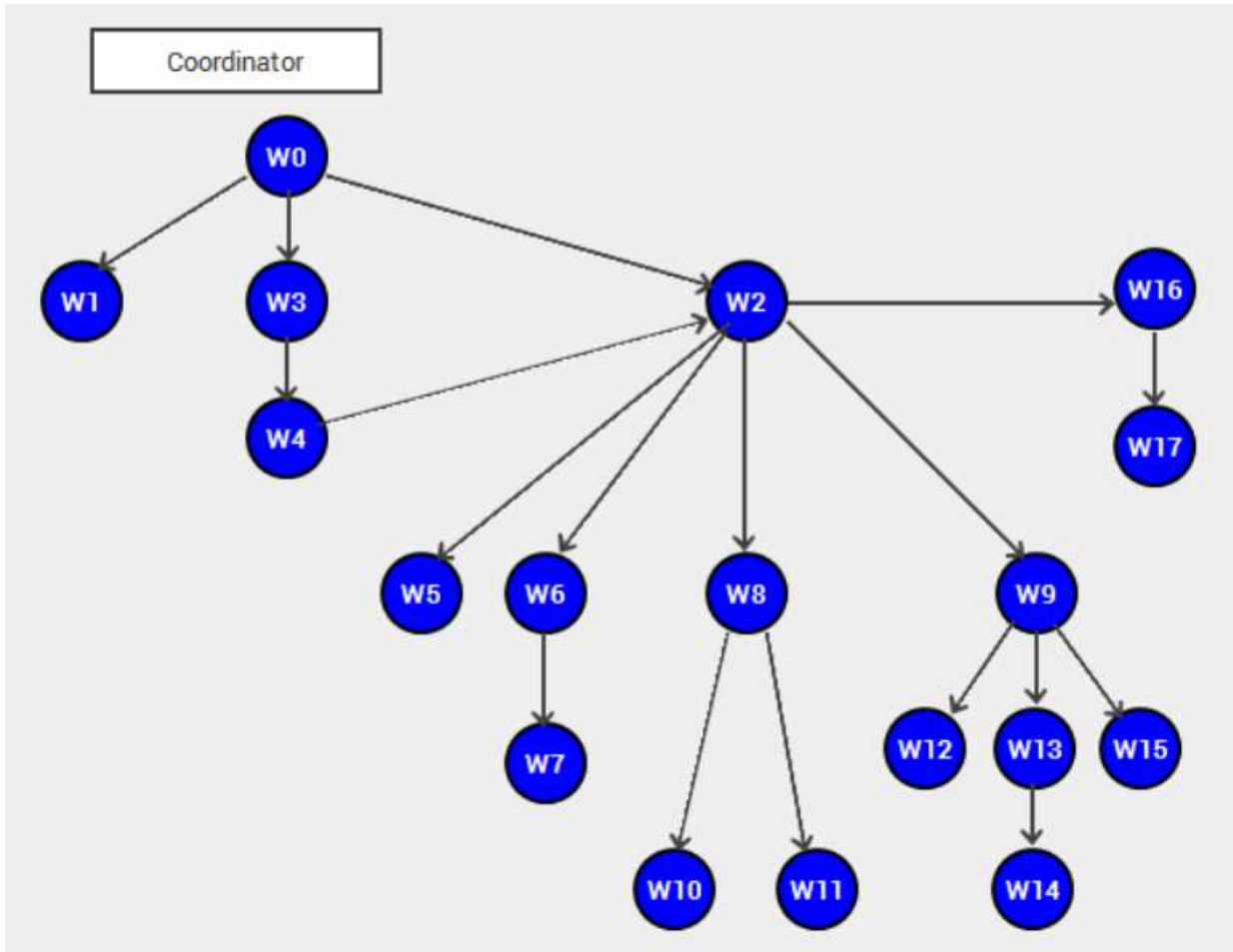
Home Map Editor Mission Logout

Logout

Are you sure you want to logout

YES NO

A.1.2.2 Coordinator



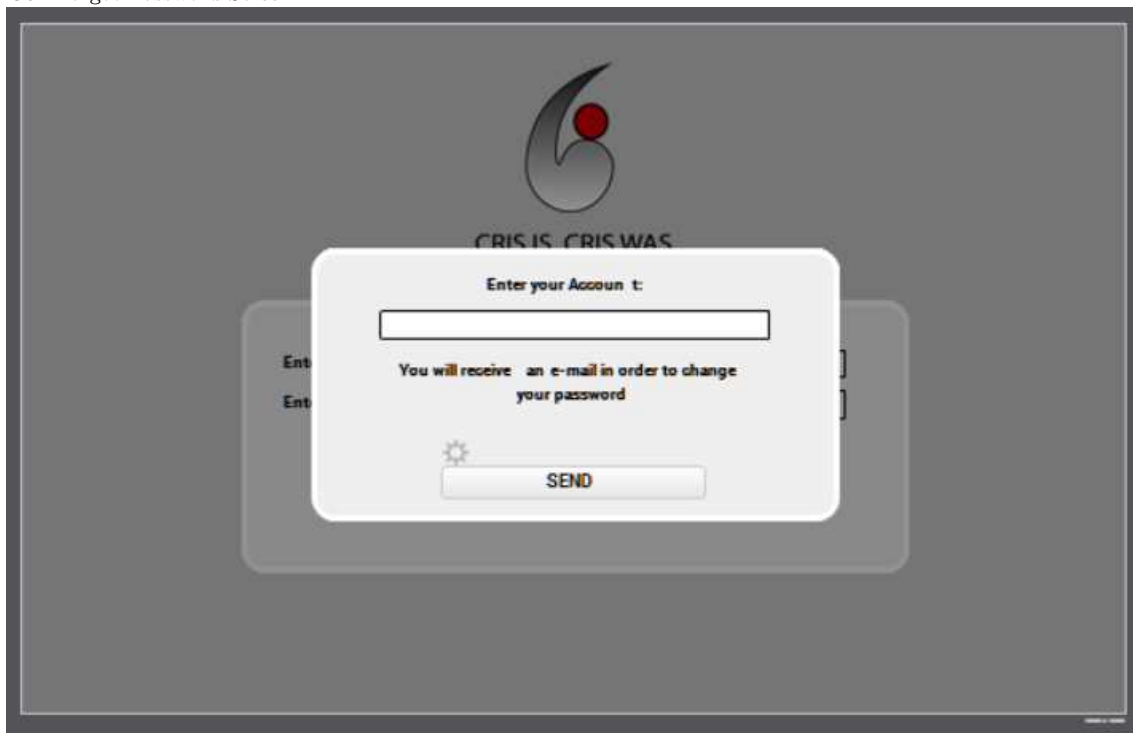
A.2 Error Warnings

Fig. A.35 Login Screen



The login screen features a light gray background. At the top center is a logo consisting of a stylized gray 'G' with a red circle inside. Below the logo is the text "CRIS IS. CRIS WAS." in a bold, sans-serif font. In the center of the screen is a white rounded rectangle containing the login form. The form has two input fields: "Enter your Login:" and "Enter your Password:". Below the password field is a blue link that says "Forgot your Password ?". At the bottom of the white rectangle is a "LOGIN" button.

Fig. A.36 Forgot Password Screen



The forgot password screen has a dark gray background. At the top center is the same logo as the login screen. Below it is the text "CRIS IS. CRIS WAS." in a bold, sans-serif font. In the center is a white rounded rectangle containing the forgot password form. The form has a single input field labeled "Enter your Account:". Below the input field is the text "You will receive an e-mail in order to change your password". At the bottom of the white rectangle is a "SEND" button with a small gear icon to its left.

Fig. A.37 Get Alert Screen



Fig. A.38 Home Screen



Fig. A.39 Lift Alert

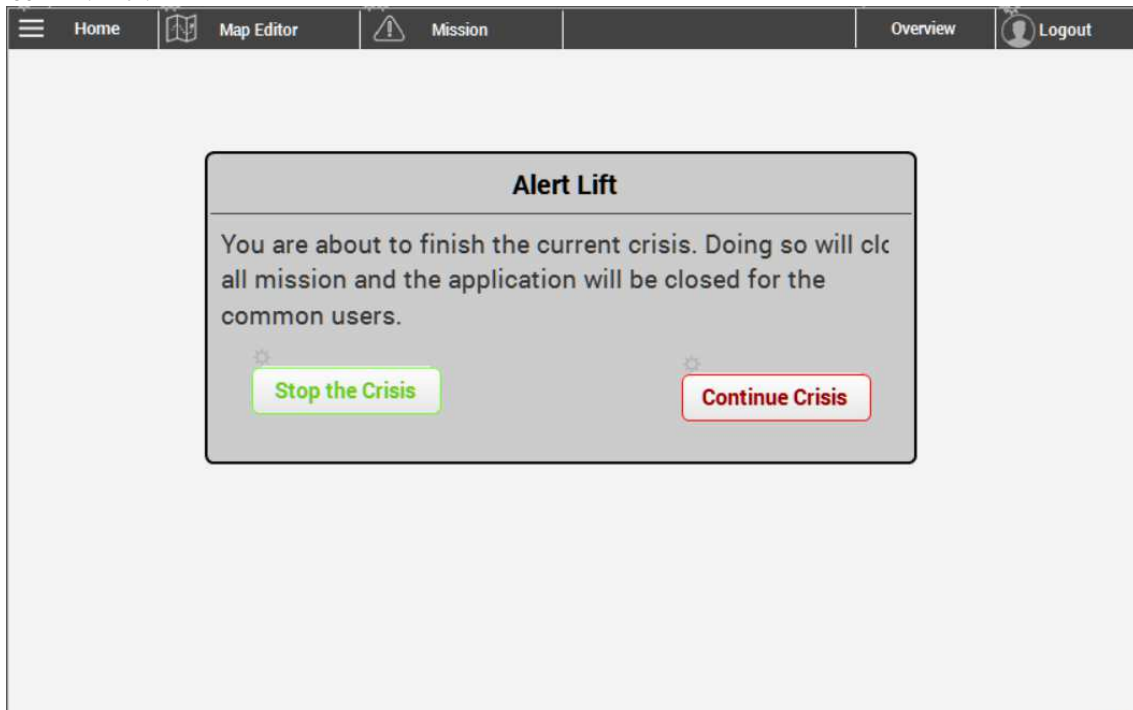


Fig. A.40 Lift Alert Confirmation

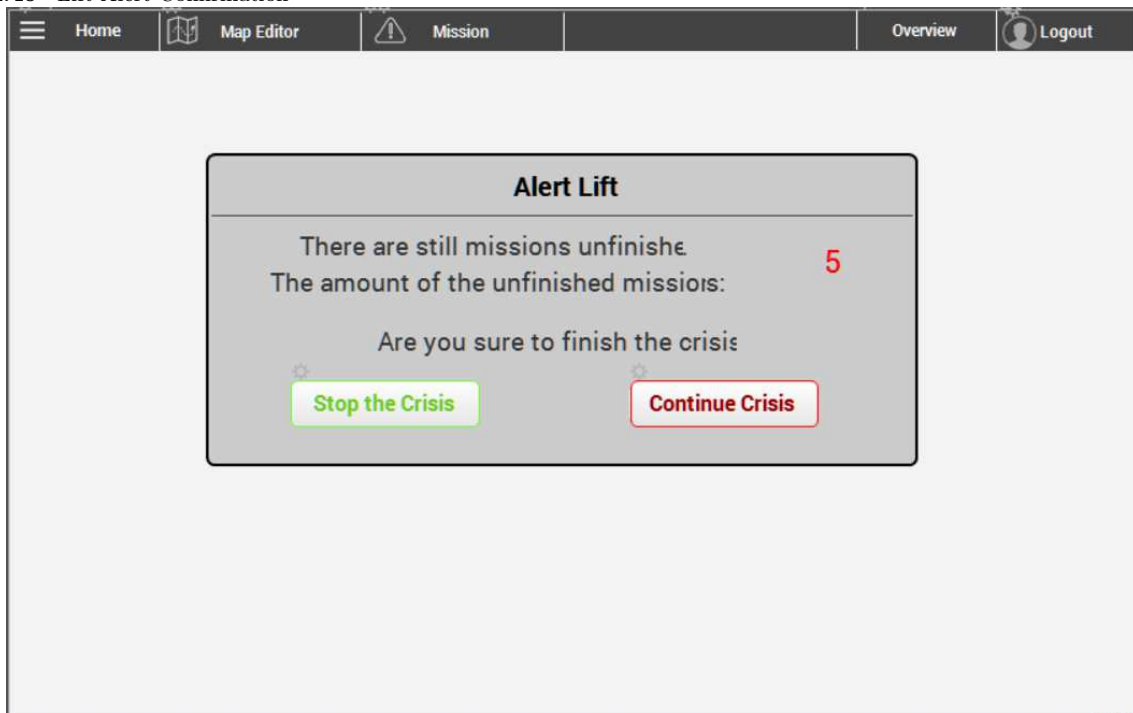


Fig. A.41 Report Screen

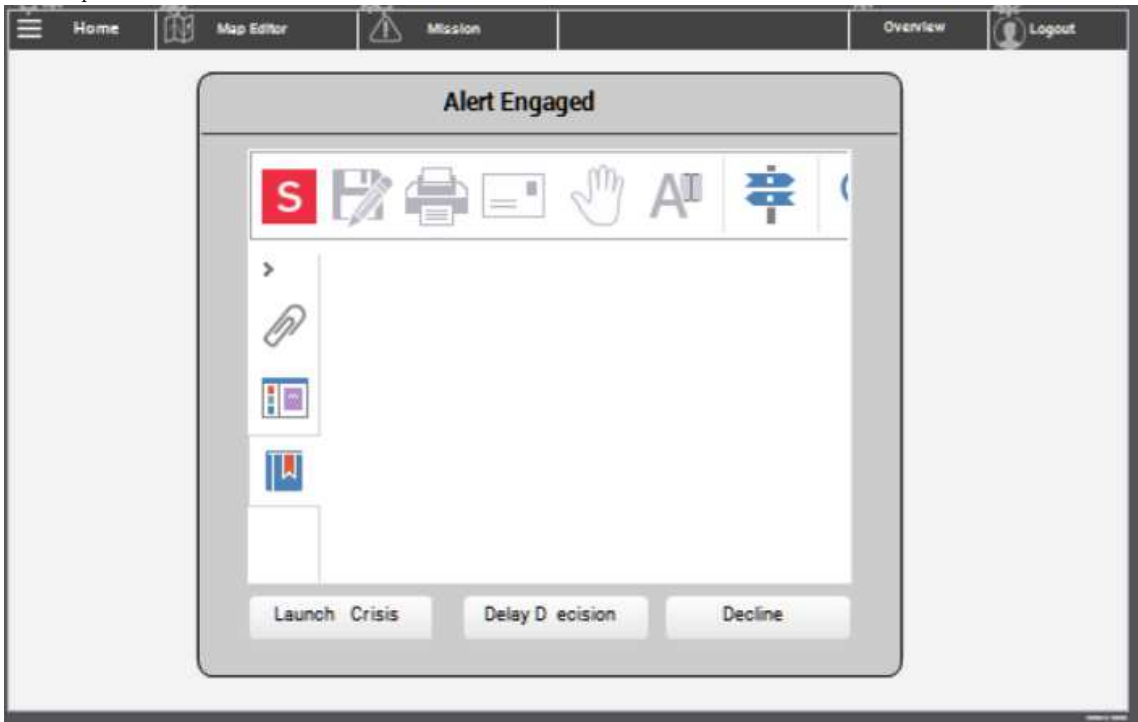


Fig. A.42 Logout Screen

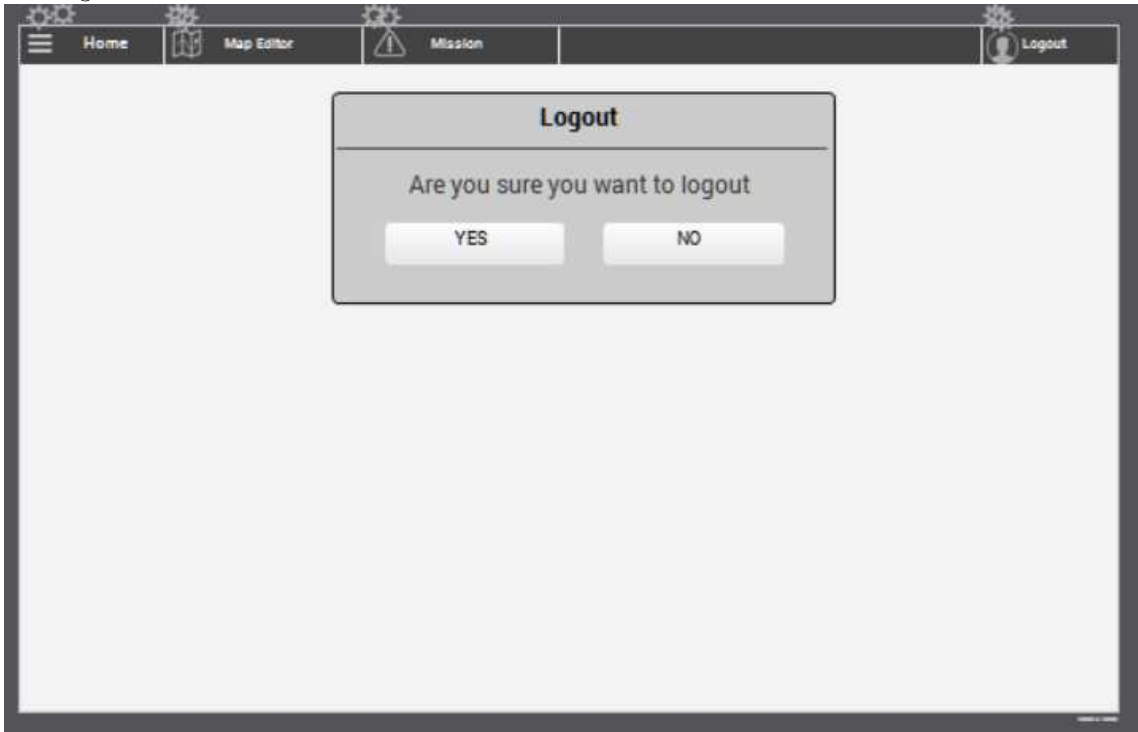


Fig. A.43 Overview 1 Screen

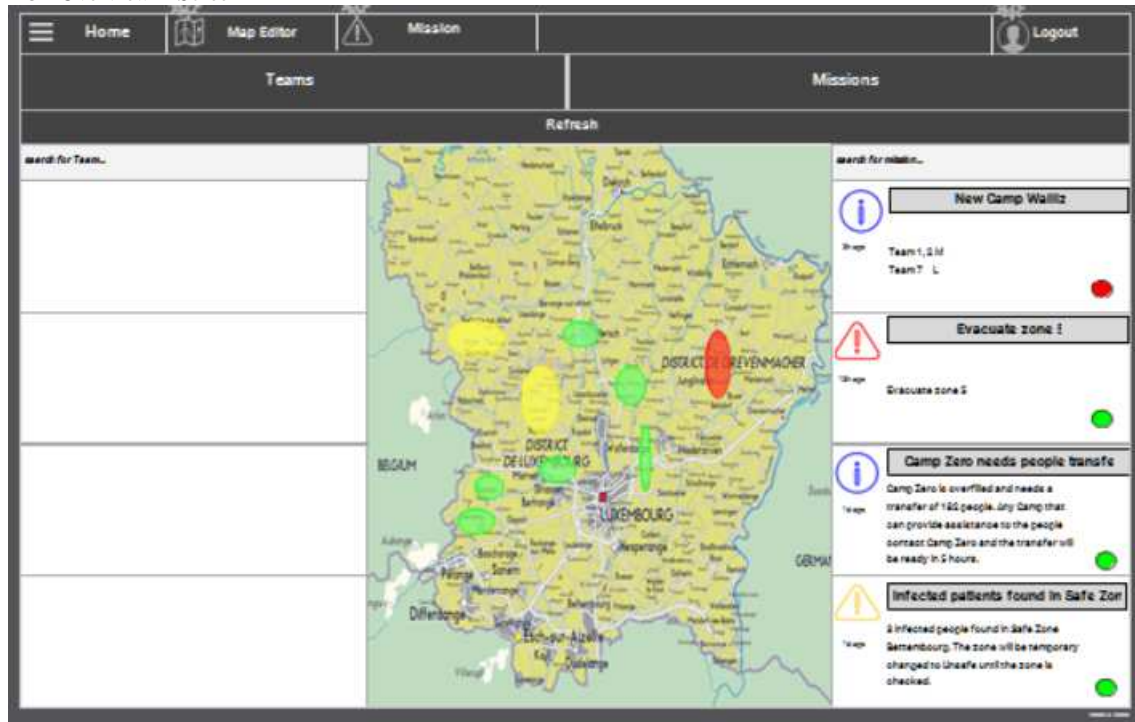


Fig. A.44 Mission Screen

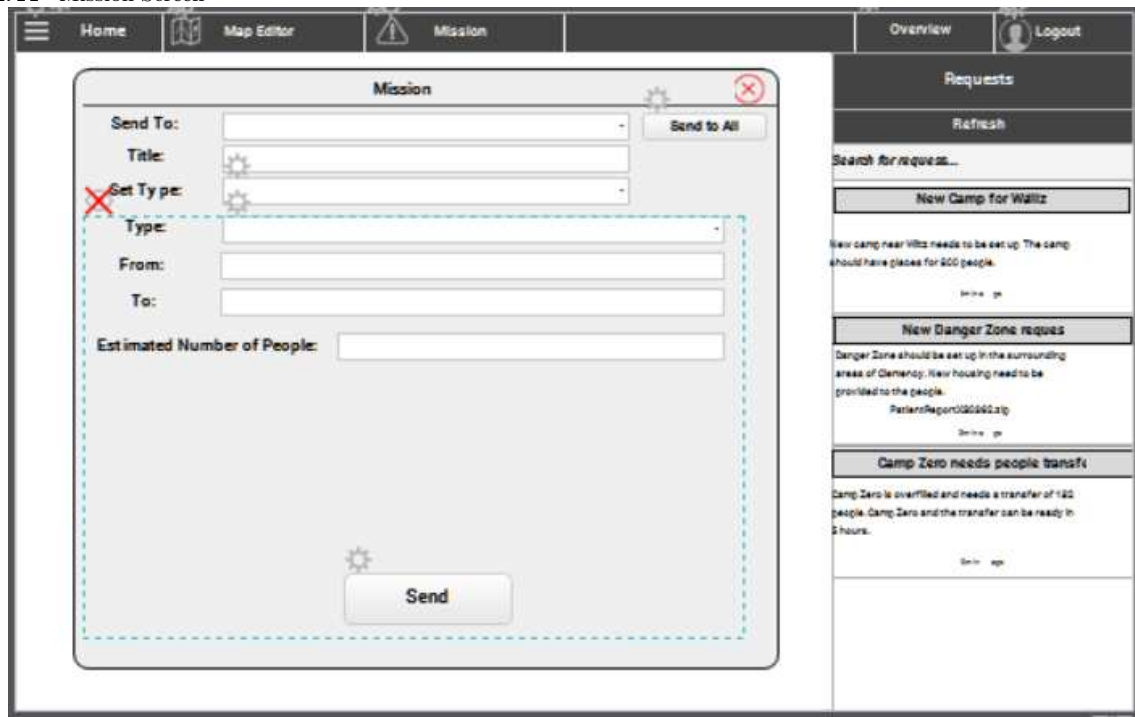


Fig. A.45 Overview 2 Screen

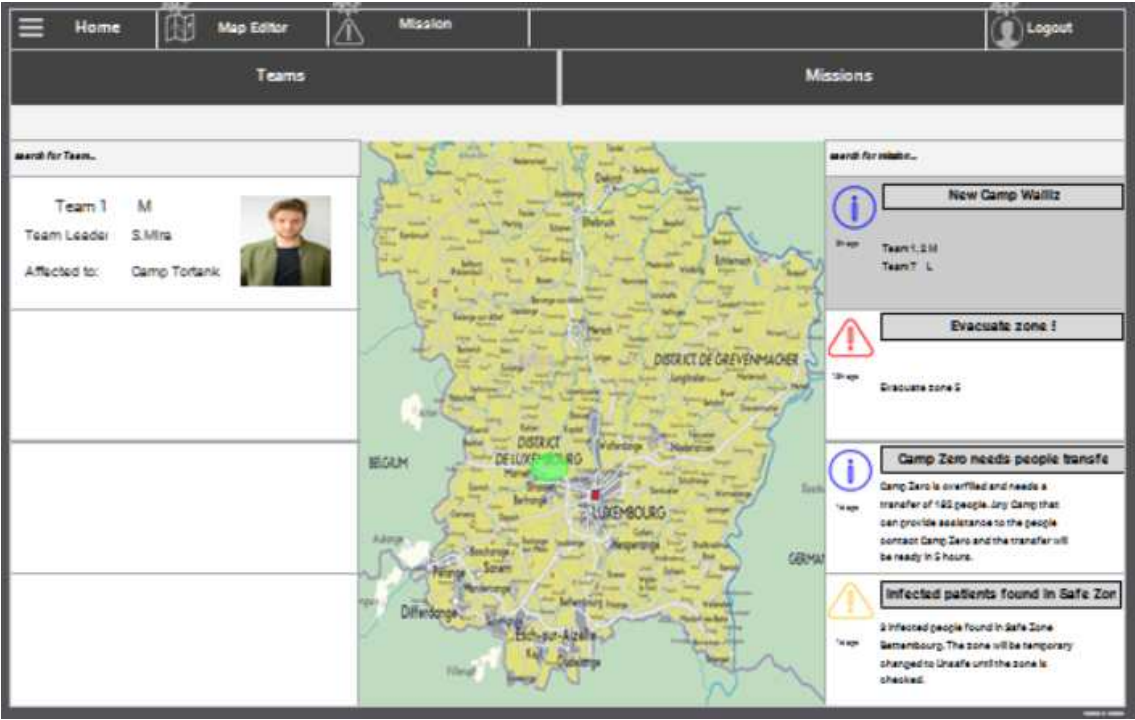


Fig. A.46 Add Zone Screen

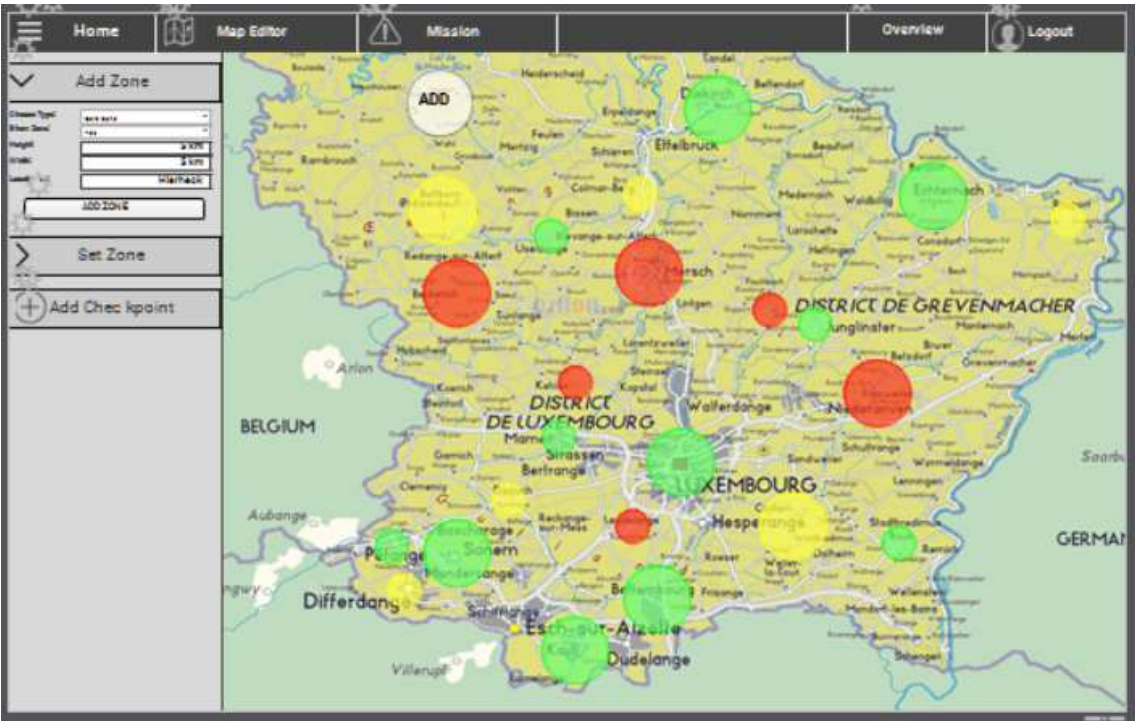


Fig. A.47 Set Zone Screen

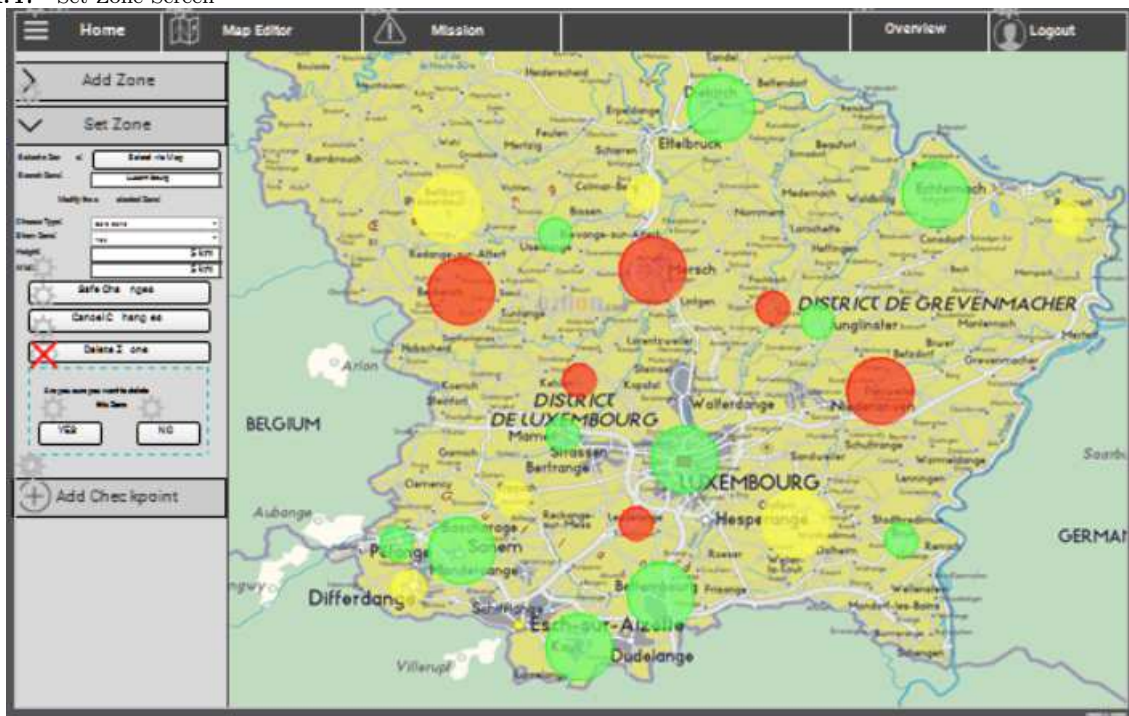


Fig. A.48 Map Screen

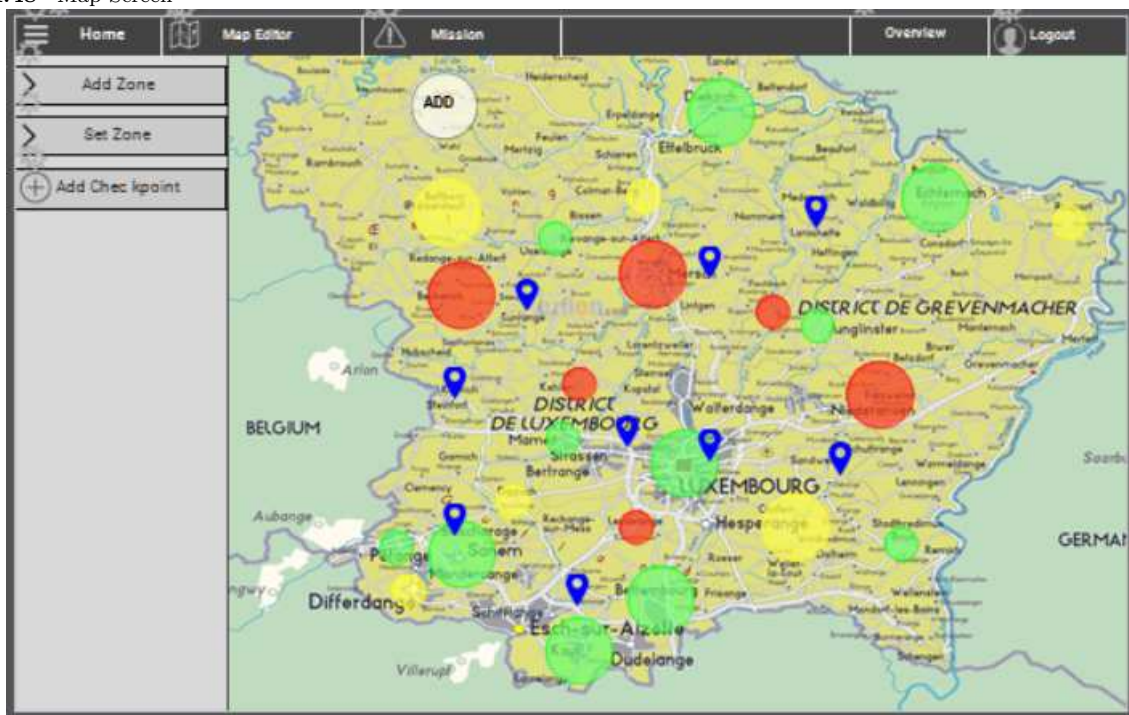


Fig. A.49 Mission Send Screen

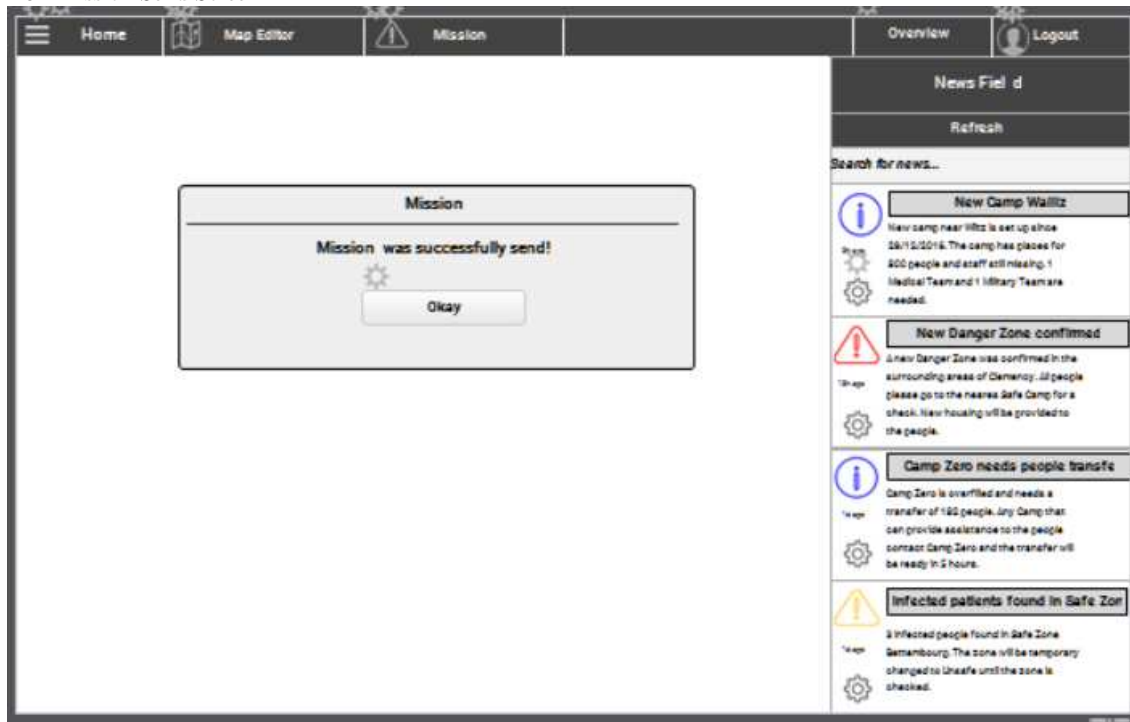


Fig. A.50 Setting Mission Screen

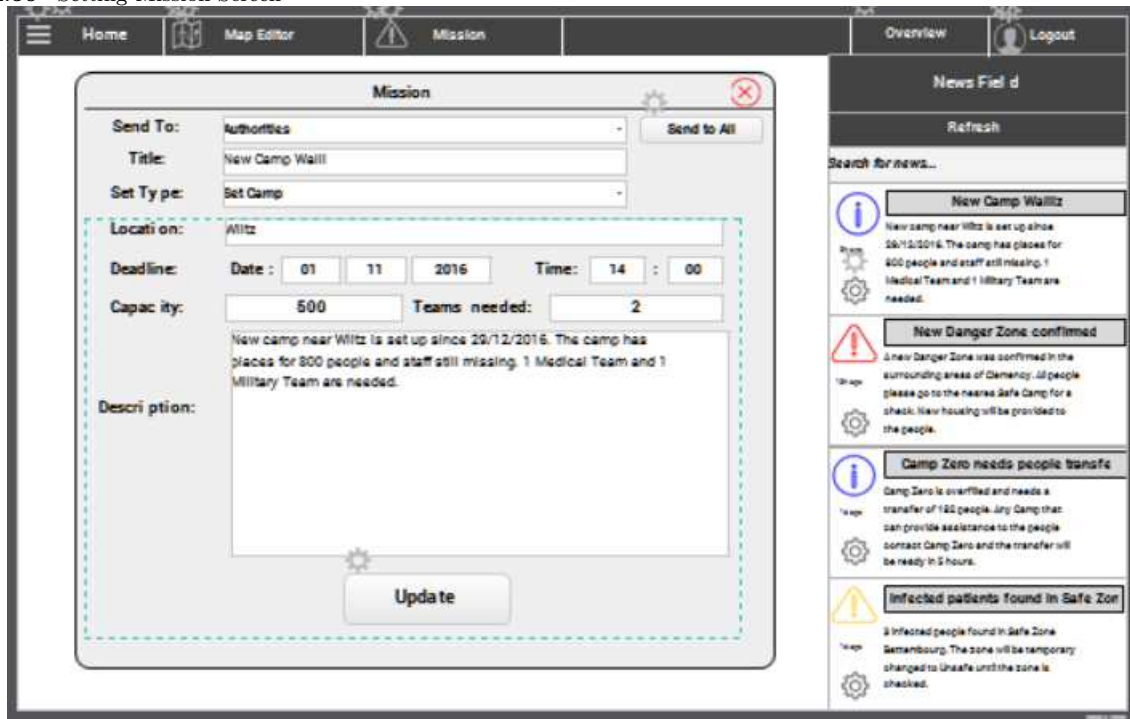


Fig. A.51 Setting Checkpoint Screen

The screenshot shows a web application interface with a top navigation bar containing 'Home', 'Map Editor', 'Mission', 'Overview', and 'Logout'. The 'Mission' tab is active. A central modal window titled 'Mission' is open, containing the following fields:

- Send To:** A dropdown menu set to 'Authorities' with a 'Send to All' button next to it.
- Title:** A text input field containing 'New Checkpoint in'.
- Set Type:** A dropdown menu set to 'Set Checkpoints'.
- Location:** A dashed green rectangular area for map interaction.
- Deadline:** Fields for 'Date' (10, 11, 2016) and 'Time' (14 : 00).
- Teams needed:** A text input field containing '2'.
- Send Infected to:** An empty text input field.
- Description:** A large empty text area.
- Send:** A button at the bottom right of the modal.

On the right side of the application, there is a 'News Field' section with a 'Refresh' button and a search bar. Below the search bar, there are four news items, each with an icon, a title, and a brief description:

- New Camp Wallitz:** New camp near Wallitz is set up since 08/12/2016. The camp has places for 800 people and staff still missing. 1 Medical Team and 1 Military Team are needed.
- New Danger Zone confirmed:** A new Danger Zone was confirmed in the surrounding area of Clermont. All people please go to the nearest Safe Camp for a check. New housing will be provided to the people.
- Camp Zero needs people transfer:** Camp Zero is overfilled and needs a transfer of 100 people. Any Camp that can provide assistance to the people contact Camp Zero and the transfer will be ready in 5 hours.
- Infected patients found in Safe Zone:** 2 Infected people found in Safe Zone Bettendorf. The zone will be temporary changed to Unsafe until the zone is checked.

Fig. A.52 Mission Update Screen

The screenshot shows the same web application interface as Fig. A.51, but the 'Mission' modal window is now displaying a success message:

Mission

Mission was successfully updated!

Below the message is an 'Okay' button.

The right side of the application, including the 'News Field' and the list of news items, remains the same as in Fig. A.51.

Fig. A.53 Access Denied

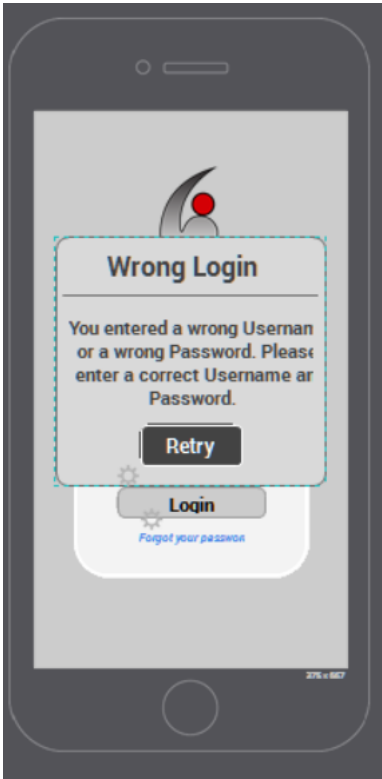


Fig. A.54 Internet Connection Missing

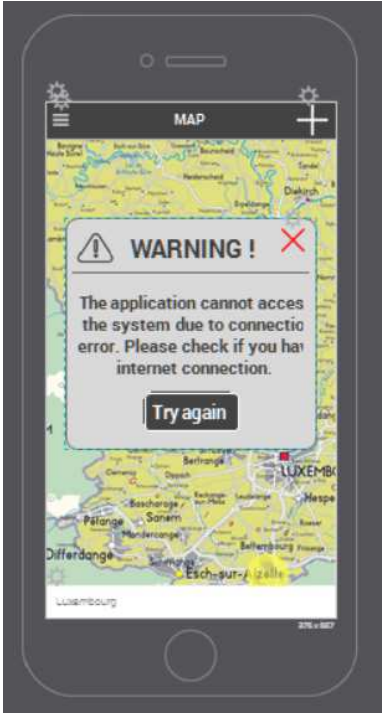


Fig. A.55 Mobile Connection Missing**Fig. A.56** Server Crash

References

1. IEEE: IEEE Standard for Software User Documentation. IEEE Std 1063-2001 (Dec 2001) 1–24