Aarhus School of Engineering

Concept of Operations

SitaWare Civilian
Company: B

Development Team

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Revision history

Version	Date	Changes
1.0	04-02-2015	Document created.

Table 1: Revision history.

Glossary and Terms

The following table contains a glossary of abbreviations and technical subject-specifik terms used in this document which require further explanation.

Abbreviation	**Meaning**	**Explanation**
COP	Common Operational Picture	Display/picture of relevant information in operation area.

Table 2: Glossary.

Indholdsfortegnelse

Introduction 1

This document describes the concept of operation of the SitaWare Civilian system. It seeks to clarify the problems and top-level operational needs that the customer and development company has agreed upon. Furthermore it describes the support and warranty requested by the customer and provided by the development company.

1.1 System Overview

Figure 1.1 depicts the overall system design and its affected actors.

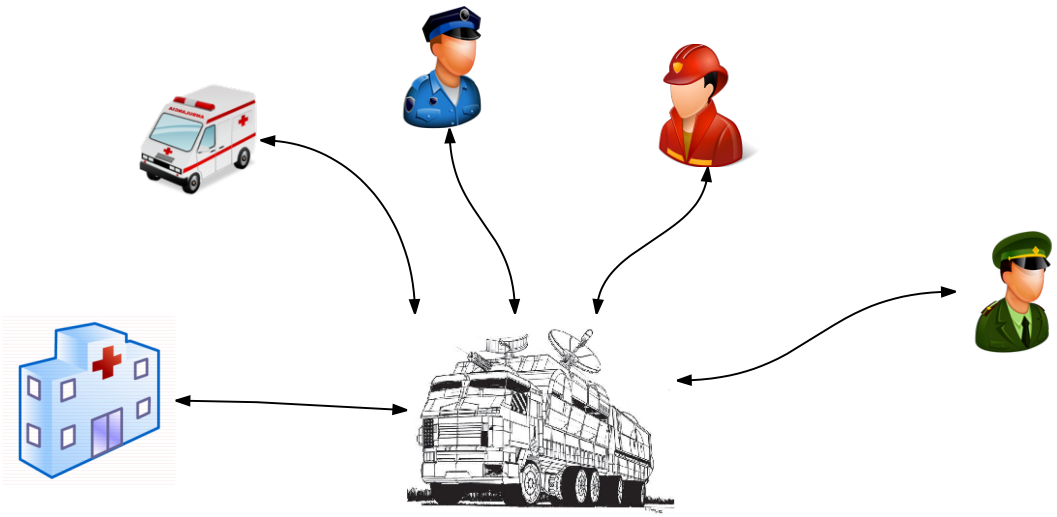

Figure 1.1: System Overview.

Problems 2

The effectiveness of an emergency management team deployed on the location of a crisis situation is greatly dependent on the team's situational awareness. The more emergency response actors involved in a crisis situation, the higher is the risk of losing overview and control of the situation. The lack of overview might end up in important information getting lost and missions being carried out in undesirable ways.

Needs 3

This chapter contains the operational needs necessary to solve the problems described in chapter 2.

The problems in chapter 2 have existed for as long as humans have tried to coordinate larger groups of actors on different missions. The problems have therefore always been solved to a certain extent, but the rapid improving technology constantly enables better solutions to be implemented. With the technology now available it is possible to develop a high-tech system with a digital Common Operational Picture (COP) with a variety of relevant real time information. The right information along with real time tracking of the users of the system will enable commanders to constantly be aware of the status of the mission and thereby to carry out missions more efficiently.

This sums up the following needs the system seeks to fulfill:

N-010 The users need to be able to pass information to one another.
N-020 The user needs relevant real time static and dynamic information.
N-030 The user needs geographical position tracking of the other users of the system.
N-040 The system needs a warranty period for 10 years.

Operations and Support Description 4

4.1 Users and other stakeholders

The system is to be used by various emergency units who can benefit from a COP in crisis situations. The following is a list of relevant users who can improve their level of communication and intelligence during work:

- The Fire Department
- The Police Department
- The Search and Rescue Department
- The Emergency Management Agency
- The Health Management Agency
- The Environment Management Agency
- The Marine Environment Management Agency
- Armed Forces

4.2 Missions

The system is intended to increase the situational awareness of emergency response units, when operational during a crisis situation. The system includes a COP which will provide situational awareness to the commanders in charge of the operation. From a mobile HQ the commanders can evaluate incoming information, act upon it and possibly dispatch orders or information to relevant actors to respond to - all through the COP.

Additionally, a hand-held Dismounted COP must provide a condensed COP which enables the commanders to act independently of the mobile HQ.

4.3 Operation Description

Figure 4.1 shows the functional flow block diagram of SitaWare Civilian. The figure depicts the top-level functionality of the system where a user initially deploys the mobile SitaWare Civilian HQ. After system initialization the user is presented to the COP and simultaneously the system starts a "thread" for collecting various static and dynamic data. The "thread" keeps the COP updated with the collected data along with registered events from other

users of the system. It is at all times possible for the user to dispatch orders to the other users.

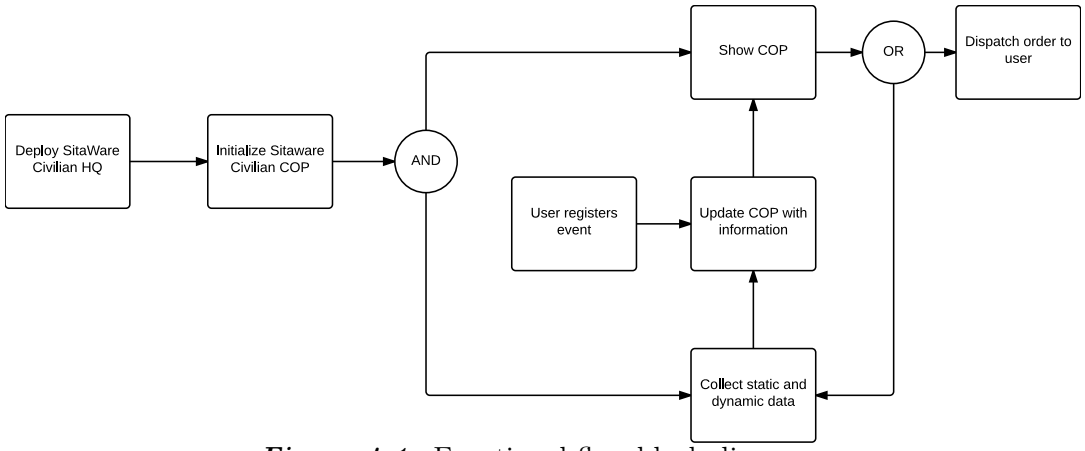

Figure 4.1: Functional flow block diagram.

4.4 Support and Warranty

In contrast to many software acquisitions, which are typically delivered "as is" and without warranty of any kind, the customer of SitaWare Civilian specifically requests that software shall be covered by warranty. Warranty period shall be at least 10 years. The customer requires the paragraphs in figure 4.2 to be part of the warranty.

Software Warranty Service consists of:

Defect Reporting. For Critical Defects, the Customer will have 24x7 access to the Service Centre by e-mail or phone to request defect repair, as described below. "Critical Defect means that the application is down or is at high risk, business functions cannot be conducted, or the Customer is experiencing continual failures or data corruption as a result of the defect. To report non-critical defects, the Customer will have e-mail or phone access to the Service Centre during the Principal Period of Maintenance ("PPM"), which is 8:00 a.m. to 5:00 p.m., local time, Monday through Friday, excluding local holidays.

Defect Repair. Defect repair includes verification of the existence of a defect, determination of the severity or impact of the defect, and determination of the conditions under which the defect may recur. The Company will, at its option:

- For a Critical Defect, commence action within a 2-shift hour response window using commercially reasonable efforts to provide an immediate fix or temporary solution of, or workaround to, the defect.
- For a non-critical defect, commence action within an 8-shift hour response window to provide either the action described for a Critical Defect or a statement that the defect will be corrected in a software product revision or a future software release.
- Provide a statement that the Software operates as described in then-current user documentation or that the defect arises when such Software is used other than in a manner for which it was designed. For Software added to an installed System, warranty service must be upgraded to the same software support plan, if any, as that of the Software already installed on that System. Customer will pay the difference between standard warranty and upgraded warranty service.

Figure 4.2: Software Warranty Service.