The use of crisis management information systems in rescue operations of Fire Rescue Service of the Czech Republic

Katerina Vichová a,*, Martin Hromadá a, David Rehák b

aTomas Bata University in Zlín, Faculty of Applied Informatics, Department of Security Engineering, Nad Stráněmi 4511, 760 05 Zlín, Czech Republic
bVSB - Technical University of Ostrava, Faculty of Safety Engineering, Department of Civil Protection, Lumírova 13, 700 30 Ostrava - Vyskovice, Czech Republic

Abstract

The article deals with the use of crisis management information systems in rescue and disposal operations of Fire Rescue Service of the Czech Republic. The first part of the article defines the selected information systems. Furthermore, the systems are closely specified and their main use in rescue and disposal operations of Fire Rescue Service of the Czech Republic is described. The second part of the article deals with the heuristic and comparative analysis of the selected information system. All findings are evaluated in the final part.

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1. Introduction

Over the life, one becomes witness to events that are unexpected and threaten the lives or health of citizens and their property. In today's increasingly modernizing time, a person is encountered with the risks every day. We are daily informed through media about events in which the lives and health of citizens are at risk. Time is relentless; especially, when we get into a situation where is endangered the health and life. We very quickly need to

* Corresponding author. Tel.: +420-576-035-321.
E-mail address: kvichova@fai.utb.cz
call the JRS (Joint Rescue System) units, whether it is fire, traffic accidents or flood.

JRS form an efficient system of links, rules of cooperation and coordination of rescue and security forces. Fire Rescue Service of the Czech Republic (FRS of the CR) is the main coordinator. Simultaneously, the FRS of the CR is also in charge at the site of the emergency (conducts cooperation of units and coordinate rescue, and liquidation work). It is governed by law no. 230 from 2015 on the Fire Rescue Service of the Czech Republic and by the law no. 239 from 2000 on the Joint Rescue System. [1]

In case of emergency or crisis situation, it is important to timely referral all available information to the units of the JRS. For this purpose, it is used a wide range of information systems which are used for vehicle deployment or monitoring of FRS, and it is also used as an information support decision making in crisis situations.

FRS is in terms of use of geospatial technologies in the field of crisis management in the Czech Republic at the highest level. It is usually equipped with an information system ArcGIS from company Esri. It allows fast information transfer directly from the event via tablet to other units of the JRS, and also to Operations and Information Centre (OPIC).

2. Fire Rescue Service of the Czech Republic

The main task of Fire Rescue Service is to protect lives and health of the citizens, the environment, animals and property from fires and other emergencies and crisis situations. It is a unified safety force which contributes to the Czech Republic's security and safety by fulfilling and organizing tasks such as fire protection, civil protection, civil emergency planning, joint rescue system, crisis management and other tasks. [2] Simultaneously, the FRS of the CR is responsible for unified system for warning and informing the citizens (technically, operationally and organizationally). Subsequent information is done not only through this system, but also through the mass media. Operators of these media are obliged to broadcast emergency information. [3]

FRS of the Zlin region is one of 14 regional districts that operate on the territory of the Czech Republic. Within the FRS, many information systems are used to support crisis management. These systems are an indispensable support for each level of management. Each of them contains certain resources, links to the available units and equipment, etc.

In case of emergency or crisis situation, it is important for the FRS personnel to have the necessary information to intervene as soon as possible. This information must have comprehensible form. Furthermore, the regional FRS should have updated contacts to the responsible persons. These contacts are part of the Intranet Crisis Management FRS of the Zlin region. This application can also be used in offline mode, thus in case of loss of Internet services and connection, and the system is updated once a week. There is also an adaptation of applications for smartphones and tablets.

Specifically, in Zlin region, these information systems are used - Intranet Crisis Management, ArcGIS, ARGIS, KRIZDATA, RozexAlarm, Map client FRS, and furthermore Czech Geological Survey, Optizon, Humanitarian Aid and others.

From the above mentioned information systems, Intranet crisis management is considered as the most effective. It is used as a solution for emergencies, as well as crisis situations or in everyday work of emergency management authorities and JRS units. The main content is the contacts directory and a directory of units and equipment.

3. Information Support for Crisis Management

Information has an important role in today’s hectic world and especially in the case of emergency. Speed, availability, confidentiality and integrity of transmitted information is one of the decisive factors affecting the level of their solutions.

Information support for crisis management is a process (set of information activities) to support information management, decision making and cognitive processes. The goal of information support is to meet the information needs required for the performance of activities related to crisis management. [4]

Information system is any system which is capable of processing and providing information. Crisis management information system is a set of information components and information elements (individual information resources), including relationships and links.
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