

Interoperability during a Cross-Border Firefighting Operation at the Dutch-German Border

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ABSTRACT

This practitioner report describes a moor- and turf-fire that occurred in 2011 at the Dutch-German border and was engaged by forces both from the Netherlands and Germany. All involved emergency management organizations were facing interoperability issues when it came to cross-border cooperation, although cooperation handbooks were already in use and the involved organizations were used to work together. The size of the incident and its remote location called for an increased coordination between all involved actors and across all command levels.

Keywords

Cross-border, Interoperability, Large-Scale Event, Fire-Fighting

INTRODUCTION AND DESCRIPTION OF THE SITUATION

At November the 03rd 2011 a moor-fire occurred at the Dutch-German Border in the area called “Amtsvenn” near the cities Enschede (NL) and Gronau (DE). An area of about 2.6 km² of moor and turf soil was affected. The affected area is a nature reserve, which is home for rare plants and a sanctuary for rare animals. More than 1.300 German and 900 Dutch firefighters were deployed in order to get the situation under control. To fight the fire and control the burning a tight and intensive cooperation between Dutch and German emergency management organizations was necessary. The fire services on both sides of the border usually cooperate during larger incidents. They regularly take part in exercises of both countries. The cooperation is fixed in a contract between the corresponding fire services.

INTEROPERABILITY IN THE GIVEN SITUATION

In every situation with a size similar to the presented the supply-organization in the area is of great importance. The information exchange related to the supply of the deployed emergency personnel needs to be coordinated in the corresponding organizations and its ICT on the one hand and between the different organizations on the other hand. Especially in incidents like this that involve different emergency management philosophies due to the involvement of different countries it is of importance to create understanding of the possibilities and capabilities of the involved organizations.

EMS interoperability is exchange of maps, map object data, messages and their related context between EMS during crisis management to support crisis managers working together. The situational map is the most comprehensive and widely used tool to collect and display information about a given situation [1]. Figure



Figure 1. Example of a situational map of the given situation – German side

2 shows such a map with additional information that is used by German fire brigades to structure both the spatial and the organizational situation [2]. Since emergency management organizations from the Netherlands and Germany use different symbols and are structured differently it is not possible to just share the view of the situational map. It is rather necessary to either explain the situation to the opposite organization by using liaison officers (as was done in this case) or to implement interoperability solutions that are able to translate icons and terms in order to create understanding. The research project DISASTER [2] aims to create such a solution by developing a common and modular ontology shared by all the stakeholders taking into account different countries cultural, linguistic and legal issues. Imperfect interoperability can lead to a serious delay in operational means and therefore to death of citizens in the worst case.

Related to the exchange of information by using situational maps is the corresponding cross-border communication. Although liaison officers and interoperability tools can help understanding the given information it is necessary to create an environment that allows information exchange in the first place. In the described situation it was not possible to exchange information by using USB-flash drives because of different security regulations that were also implemented in the used hardware. The deployment of the helicopter that shot pictures like the one in figure 1 needed to be coordinated between Germany and the Netherlands on a political level in order to have overflight-permission for the whole affected area. These examples show that cross border interoperability that is solved on a technical level always needs to be solved on an organizational level too. It is therefore important to implement a certain “interoperability environment” as has been done in a first approach in the area of Gronau and Enschede.



Figure 2. Example of a situational map of the given situation – Dutch side (DISASTER enabled)

CONCLUSION AND POSSIBLE IMPROVEMENTS

The described situation shows that interoperability solutions for large scale emergency events are important factors to improve the performance of the deployed units and the overall situation management. The easier information can be shared the better the involved units can react to the situation at hand. However, it is not enough to enable electronic support devices or even liaison officers to just translate information, rather it is necessary to implement an interoperability environment. This also involves political and organizational decisions.

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