Chapter 12
Mobile Communication Tools Using for Disaster Recovery Model

Irfan Macit
Çukurova Üniversitesi, Turkey

ABSTRACT

Disasters can be described as natural or man made events such that occurs unexpectedly and disrupting human life. Information services can be shortly described using computers with data processing methods. There are a lot of activities carried by help and rescue teams after disaster. These activities must be on an order and related to each other. Help and rescue activities has vital importance during first 8 and 36 hours depending on the type and the intensity of the disaster. In order to perform these vital activities efficiently, work order and priority determination might be evaluated. Information services help rescue teams on performing these type activities fast, reliable, and efficiently. There are a lot of computer aided rescue planning tools developed for the rescue operations after disaster in all over the world. These planning tools can vary depending on the disaster type, scale and geographical area. Functions of these disaster tools used for logistics and work planning can be classified according to their tasks. They also determine magnitude of the disaster for the current situation and for the future, related to the impact area of the disaster. Scale of the disaster affects the performance of the information activities directly. Many of the planning tools used today can vary depending on the scale of the disaster. Additionally depending on the primary and secondary effects of the disaster, it can produce various solutions. Studies that shows the importance of Information flow on after disaster help activities, illustrate that the information flow does not just take place on disaster region; it is necessary and important to have information flow to the other regions too. Today there are several kinds of tools to provide information flow. One of these tools is telephone systems which are known as Global System for Mobile Communications (GSM). There are different width-tapes of the communication frequencies on these –GSM- systems. The frequencies have channels for carrying sound, image and data. Via being able to carry sound, image and data separately

DOI: 10.4018/978-1-61520-670-4.ch012

or jointly makes easy to use different applications on GSM networks. The applications could be developed that are used immediately after disaster on these GSM networks which need short time for working. On Circuit Switched Data (CSD) lines that are used as data lines, the GSM Networks that work after any disaster could be used to rescue operations after disaster. In our study, it is recommended to flow of the computer data as GSM and Computer Data to two sides. In addition the examples that show the data standards about 'which types and how flow of the datas must be' would given. In the recommended application model, to carry data such as its priorities, kinds information between rescue coordination center and disaster rescue area would be defined.

INTRODUCTION

Disasters can be described as natural or man made events such that occurs unexpectedly and disrupting human life. Information services can be shortly described using computers with data processing methods. There are a lot of activities carried by help and rescue teams after disaster. These activities must be on an order and related to each other. Help and rescue activities has vital importance during first 8 and 36 hours depending on the type and the intensity of the disaster. In order to perform these vital activities efficiently, work order and priority determination might be evaluated. Information services help rescue teams on performing these type activities fast, reliable, and efficiently. There are a lot of computer aided rescue planning tools developed for the rescue operations after disaster in all over the world. These planning tools can vary depending on the disaster type, scale and geographical area. Functions of these disaster tools used for logistics and work planning can be classified according to their tasks. They also determine magnitude of the disaster for the current situation and for the future, related to the impact area of the disaster. Scale of the disaster affects the performance of the information activities directly. Many of the planning tools used today can vary depending on the scale of the disaster. Additionally depending on the primary and secondary effects of the disaster, it can produce various solutions.

Communication became a very important term when disaster is occured. Survivors wait for help Search and rescue teams.

After some disasters, fixed lines or data lines become unservicable for communication. For instance, following the disasters such as earthquakes landslides, or fires, technological infrastructure is not used. For services to be permanent, mobile communication systems are known to be needed. Despite being able to generate local solutions, wireless public band (or – Civil Band - CB) is not able to enable data communication properly. Therefore, infrastructure services, which will constantly be able to provide a more flexible and effective communication system, are needed. GSM system is used in every field today. Since there is an infrastructure backup and its Works rely on a cellular base, it can provide communication services in areas that are geographically dependent from each other. The property of the cellular system is that communication between communication centers is adequate. It is not neccessary to install an appliance on a cable, from one side to the other, as it is in fixed lines or data lines. Voice, data and image can be sent through the same network. In disasters, dataflow's being made correctly and on time enables to carry out post-disaster services in a better way. By means of the data coming on time, transportation of rescue teams to the areas waiting for aid, logistic services and most significantly health services are provided to be more effective.