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Reference scenario for the deployment of emergency communications;
Part 2: Mass casualty incident in public transportation

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Contents

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Foreword

This Technical Specification (TS) has been produced by ETSI Technical Committee Satellite Earth Stations and Systems (SES).

The present document is part 2 of a multi-part deliverable covering the reference scenario for the deployment of emergency communications, as identified below:

Part 1: "Earthquake";

Part 2: "Mass casualty incident in public transportation".

Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**may not**", "**need**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the ETSI Drafting Rules (Verbal forms for the expression of provisions).

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Introduction

Major emergencies or disasters may result in a need for additional resources in local telecommunications networks, especially if they are damaged or overloaded, in order to maintain or enhance the ability of emergency services to respond and coordinate their activities effectively. Satellites can play a role in replacing or supplementing terrestrial telecommunications links in these scenarios. For example satellite systems can provide:

- broadband and secure communication facilities anywhere/anytime in locations where no other facilities are available
- temporary replacement of broken/saturated infrastructures by means of backhauling
- fast deployment of temporary communication networks during emergencies/disasters

Hence a basis for requirements for such links needs to be established, and it is intended that the scenarios defined here may be used for this purpose at a later stage.

The present document also is a response to EC mandate M/496 [i.13], specifically dossier 9 "Disaster Management" part 2: "Emergency Telecommunication Services" which aims to support standardization for the optimal needs of the emergency responders.

The use of satellite communication in disasters is described in ETSI TR 102 641 [i.3].

In the present document, clause 4 defines the scenario, what actions need to be taken by which actors (who will have communications needs) and what their tasks are. This definition constitutes a basis for clause 5, which defines the nature of information exchanges needed. Clause 6 defines the detailed parameters relating to positions and movements of scenario actors, which are intended to form a basis for modelling of the scenario response topology. These parameters are generic enough to be applicable or adapted to similar but different scenarios, and may eventually be used to model the requirements for actors' communication exchanges, and associated capacities.

1 Scope

The present document defines a reference scenario for a mass-transportation accident (MTA) in a rural environment. The scenario includes definition of the responders involved and their gross communication needs without specifying the network technologies involved. Finally the topology modelling of the responders involved is defined, in terms of their disposition in the incident area, their time evolution and their movements (if any).

The scenario is not generic in the sense of representing all emergencies of this type, but is intended to be a "typical" example, and thus a reference in order to allow evaluation and dimensioning of required overall emergency telecommunications.

The regulations and operating procedures for emergency responses vary between countries; for example the organization responsible for the overall emergency management can be the police, the fire or rescue organization, a dedicated organization for this purpose (e.g. civil protection), or others.

The response services defined for these scenarios are limited to safety-related services (i.e. not security such as law enforcement).

Casualties and personnel not active in the rescue operations (e.g. the press) have been excluded, as their communications needs are not covered by the emergency communication systems considered here, but their needs are considered in ETSI TR 102 410 [i.2].

2 References

2.1 Normative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the reference document (including any amendments) applies.

Referenced documents which are not found to be publicly available in the expected location might be found at http://docbox.etsi.org/Reference.

NOTE: While any hyperlinks included in this clause were valid at the time of publication, ETSI cannot guarantee their long term validity.

The following referenced documents are necessary for the application of the present document.

Not applicable.

2.2 Informative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the reference document (including any amendments) applies.

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The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

[i.1] ETSI TS 102 181: "Emergency Communications (EMTEL); Requirements for communication between authorities/organizations during emergencies".

[i.2] ETSI TR 102 410: "Emergency Communications (EMTEL); Basis of requirements for communications between individuals and between individuals and authorities whilst emergencies are in progress".

[i.3] ETSI TR 102 641: "Satellite Earth Stations and Systems (SES); Overview of present satellite emergency communications resources".