



Technical Report

**Satellite Earth Stations and Systems (SES);  
Overview of present satellite emergency  
communications resources**

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Reference

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Keywords

architecture, broadband, emergency, satellite

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# Contents

Intellectual Property Rights .....	4
Foreword.....	4
Introduction .....	4
1 Scope .....	5
2 References .....	5
2.1 Normative references .....	5
2.2 Informative references.....	5
3 Abbreviations .....	6
4 Positioning of the problem .....	7
4.1 Disaster management and response.....	8
4.1.1 Disaster management cycle.....	8
4.1.2 Disaster response .....	9
4.2 Disaster management and Information and Communication Technology.....	11
4.3 Satellite-assisted disaster management.....	11
4.4 Emergency telecommunications.....	12
5 Satellite systems for disaster management.....	14
5.1 Narrowband telecommunications .....	14
5.2 Broadband telecommunications .....	14
5.3 Global navigation and positioning.....	15
5.4 Observation .....	15
6 Regulatory and standardization aspects.....	15
6.1 Regulatory aspects.....	15
6.1.1 Basic overview on current spectrum allocations.....	15
6.1.2 International Organizations.....	16
6.2 Standardization aspects .....	16
7 International initiatives.....	17
7.1 The Tampere Convention.....	17
7.2 The International Charter on Space and Major Disasters .....	17
7.3 UN-SPIDER .....	17
History .....	18

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## Foreword

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

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## Introduction

Recent major catastrophes have raised awareness of the need for effective emergency telecommunication networks. Satellite communication, observation and navigation are the cornerstones of emergency management because they are resilient to Earth damage and provide a wide coverage of service.

Based on these considerations, TC SES has created in September 2006 a new working group dedicated to Satellite Emergency Communications, namely SatEC, and requested SatEC to start its work by a survey on satellite emergency communications.

The present document is a revision of the initial document TR 102 641.

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# 1 Scope

The present document presents an overview of concepts, systems and initiatives related to the use of space resources in the context of disaster management, including:

- An introduction to the field of disaster management and the relation with Information and Communication Technology.
- The role of space technology in disaster management.
- The requirements of telecommunication systems deployed for disaster management.
- A list of typical space resources used, covering earth observation, satellite navigation and satellite communications.
- A list of initiatives in the field of emergency communications, including standardization activities.

The present document does not cover extensively any given technology through e.g. project descriptions or equipment characteristics as it is meant as an overview document.

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# 2 References

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## 2.1 Normative references

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

Not applicable.

## 2.2 Informative references

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] "Environmental health in emergencies and disasters: a practical guide". Edited by B. Wisner and J. Adams, World Health Organization, 2003.
- [i.2] ETSI TS 102 181: "Emergency Communications (EMTEL); Requirements for communication between authorities/organizations during emergencies".
- [i.3] Recommendation ITU-T X.1303: "Common alerting protocol (CAP 1.1)".
- [i.4] ETSI TR 103 166: "Satellite Earth Stations and Systems (SES); Satellite Emergency Communications (SatEC); Emergency Communication Cell over Satellite (ECCS)".
- [i.5] ISO 22320: "Societal security -- Emergency management -- Requirements for incident response".
- [i.6] OASIS, OASIS Emergency Management TC: "Common Alerting Protocol Version 1.2".