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Satellite Earth Stations and Systems (SES);
Broadband Satellite Multimedia (BSM);
Common air interface specification;
Satellite Independent Service Access Point (SI-SAP) interface:
Services

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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).

Modal verbs terminology

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Introduction

The SI-SAP interface implements the concept of hardware abstraction layer, aimed at logically separating Satellite Independent (SI) from Satellite Dependent (SD) layers of the protocol stack. In particular, it enables address resolution, multicast management, resource reservation and data transfer services so as to keep the implementation of the involved functionalities at SI and SD layer independent. To this regard, the present document identifies the functional areas for which SI-SAP interface service primitives are actually missing and provides guidance to the use and the implementation of the complete set of SI-SAP interface service primitives.

It can be noted that the definition of SI-SAP interface services and the technical specification of inherent primitives complements and completes the material already available in the existing ETSI documents relating to SI-SAP interface ETSI TS 102 292 [1] to ETSI TS 102 461 [9]. Hence, the present document along with technical specifications ETSI TS 102 292 [1] to ETSI TS 102 461 [9] should be considered as the reference documentation for SI-SAP interface services' definition and primitives' specification.

1 Scope

The present document specifies the SI-SAP interface service and related primitives preliminarily defined in [1] and [7].

The scope of the document is twofold. On the one hand, revision of existing service specifications is carried out in order to reflect services' update demanded by current satellite systems. On the other hand, new services are defined in order to bridge the gaps in the following functional areas:

- Logon/logoff.
- Satellite Independent (SI) layer configuration.
- Group transmit.

Accordingly, the specification of new primitives for the aforementioned services is also provided in the present document.

Final notes about the use and the implementation of SI-SAP interface service primitives are provided as two independent annexes at the end of the present document. In more detail, illustration of SI-SAP interface and primitives' implementation in specific use-cases is given in the annex A. Details about the implementation of a SI-SAP interface in real satellite system are provided in the annex B, where the focus is on the SI-SAP interface implementation as i) local interface (mandatory) or ii) external interface to a BSM subsystem (optional).

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.

[1] ETSI TS 102 292 (V1.1.1): "Satellite Earth Stations and Systems (SES); Broadband Satellite Multimedia (BSM) services and architectures; Functional architecture for IP interworking with BSM networks".

[2] ETSI TS 102 464 (V1.1.1): "Satellite Earth Stations and Systems (SES); Broadband Satellite Multimedia (BSM); Interworking with DiffServ QoS".

[3] ETSI TS 102 463 (V1.1.1): "Satellite Earth Stations and Systems (SES); Broadband Satellite Multimedia (BSM); Interworking with IntServ QoS".

[4] ETSI TS 102 462 (V1.1.1): "Satellite Earth Stations and Systems (SES); Broadband Satellite Multimedia (BSM); QoS Functional Architecture".

[5] ETSI TS 102 460 (V1.1.1): "Satellite Earth Stations and Systems (SES); Broadband Satellite Multimedia (BSM); Address Management at the SI-SAP".

[6] ETSI TS 102 856-2 (V1.1.1): "Satellite Earth Stations and Systems (SES); Broadband Satellite Multimedia (BSM); Multi-Protocol Label Switching (MPLS) interworking over satellite; Part 2: Negotiation and management of MPLS labels and MPLS signalling with attached networks".

[7] ETSI TS 102 357 (V1.1.1): "Satellite Earth Stations and Systems (SES); Broadband Satellite Multimedia (BSM); Common Air interface specification; Satellite Independent Service Access Point SI-SAP".