



**Satellite Earth Stations and Systems (SES);
Family SL Satellite Radio Interface (Release 1);
Part 3: Control Plane and User Plane Specifications;
Sub-part 8: NAS Layer and User Plane Operation
for MBMS Services**

Reference

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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 3, sub-part 8 of a multi-part deliverable. Full details of the entire series can be found in ETSI TS 102 744-1-1.

Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**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

This multi-part deliverable (Release 1) defines a satellite radio interface that provides UMTS services to users of UEs via geostationary (GEO) satellites in the frequency range 1 518,000 MHz to 1 559,000 MHz (downlink) and 1 626,500 MHz to 1 660,500 MHz and 1 668,000 MHz to 1 675,000 MHz (uplink).

1 Scope

The present document defines the operation of Multimedia Broadcast Multicast Services (MBMS) in support of efficient delivery of IP multicast traffic across the Family SL satellite radio interface. This includes extensions to the Non-Access Stratum (NAS) Layer peer-to-peer interface (defined in ETSI TS 124 007 [1] and ETSI TS 124 008 [2]) between the User Equipment (UE) and a new architectural entity defined as the Broadcast Multicast Service Node (BMSN). In addition, extensions to the IP User Plane Handler (UPH) to interpret IP multicast management and routing protocols are defined in the present document to allow automated triggering of MBMS services as defined for the Family SL satellite radio interface.

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 124 007: "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Mobile radio interface signalling layer 3; General Aspects (3GPP TS 24.007 Release 4)".
- [2] ETSI TS 124 008: "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Mobile radio interface Layer 3 specification; Core network protocols; Stage 3 (3GPP TS 24.008 Release 4)".
- [3] ETSI TS 102 744-1-4: "Satellite Earth Stations and Systems (SES); Family SL Satellite Radio Interface (Release 1); Part 1: General Specifications; Sub-part 4: Applicable External Specifications, Symbols and Abbreviations".
- [4] ETSI TS 102 744-3-2: "Satellite Earth Stations and Systems (SES); Family SL Satellite Radio Interface (Release 1); Part 3: Control Plane and User Plane Specifications; Sub-part 2: Bearer Control Layer Operation".
- [5] ETSI TS 102 744-3-6: "Satellite Earth Stations and Systems (SES); Family SL Satellite Radio Interface (Release 1); Part 3: Control Plane and User Plane Specifications; Sub-part 6: Adaptation Layer Operation".
- [6] ETSI TS 102 744-3-7: "Satellite Earth Stations and Systems (SES); Family SL Satellite Radio Interface (Release 1); Part 3: Control Plane and User Plane Specifications; Sub-part 7: NAS Layer Interface Extensions for MBMS Services".