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Satellite Earth Stations and Systems (SES); Air Interface for S-band Mobile Interactive Multimedia (S-MIM); Part 4: Physical Layer Specification, Return Link Synchronous Access

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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 4 of a multi-part deliverable. Full details of the entire series can be found in part 1 [1].

Introduction

The S-MIM system specified herein is designed to provide:

- interactive mobile broadcast services enhancing DVB-SH services;
- messaging services for handhelds and vehicular terminals, capable of serving millions of terminals due to a novel optimised air-interface in the RTN link;
- real-time emergency services such as voice and file transfer, mainly addressing institutional users on-the-move such as fire brigades, civil protection, etc.

Inside the S-band, the 2 GHz MSS band is of particular interest for interactive multimedia, since it allows two-way transmission. Typically, the DVB-SH standard [i.4] is applied for broadcast transmission; ESDR [i.2] or DVB-NGH [i.5] standards are other alternatives. Essential requirements under the R&TTE directive are covered by the harmonized standard EN 302 574-1 [i.3], [i.6] and [i.7].

The technology applied has been developed in the framework of the ESA funded project "DENISE" (ESTEC/Contract Number 22439/09/NL/US).