

**Digital cellular telecommunications system (Phase 2+);
Mobile radio interface;
Layer 3 specification
(GSM 04.08 version 5.14.1 Release 1996)
(ETS 300 940 V5.14.1:2000-04)**

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ETSI

European Telecommunications Standards Institute

ETSI Secretariat

Postal address: F-06921 Sophia Antipolis CEDEX - FRANCE

Office address: 650 Route des Lucioles - Sophia Antipolis - Valbonne - FRANCE

Internet: secretariat@etsi.fr - <http://www.etsi.org>

Tel.: +33 4 92 94 42 00 - Fax: +33 4 93 65 47 16

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Foreword

This European Telecommunication Standard (ETS) has been produced by the Special Mobile Group (SMG) Technical Committee of the European Telecommunications Standards Institute (ETSI).

This ETS specifies the procedures used at the radio interface (Reference Point Um, see GSM 04.02) for Call Control (CC), Mobility Management (MM) and Radio Resource (RR) management within the European digital cellular telecommunications system.

The contents of this ETS is subject to continuing work within SMG and may change following formal SMG approval. Should SMG modify the contents of this ETS, it will be resubmitted for OAP by ETSI with an identifying change of release date and an increase in version number as follows:

Version 5.x.y

where:

- 5 indicates GSM Phase 2+ Release 1996;
- x the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- y the third digit is incremented when editorial only changes have been incorporated in the specification;

The specification from which this ETS has been derived was originally based on CEPT documentation, hence the presentation of this ETS is not in accordance with the ETSI drafting rules.

NOTE: The listing of messages and information elements with GSM 04.08 is by alphabetic order. To maintain this order and avoid continuous renumbering as new messages and information elements are defined and to maintain alignment with clause numbering of GSM 04.08 Phase 2, an innovative subclause numbering scheme has been used.

Proposed transposition dates	
Date of adoption of this EN:	31 March 2000
Date of latest announcement of this ETS (doa):	30 June 2000
Date of latest publication of new National Standard or endorsement of this ETS (dop/e):	31 December 2000
Date of withdrawal of any conflicting National Standard (dow):	31 December 2000

Introduction

The present document includes references to features which are not part of the Phase 2+ Release 96 of the GSM Technical specifications. All subclauses which were changed as a result of these features contain a marker (see table below) relevant to the particular feature.

The following table lists all features that were introduced after Release 96.

Feature	Designator
BA Range IE handling	\$(impr-BA-range-handling)\$
Advanced Speech Call Item	\$(ASCI)\$
Call Completion Busy Subscriber	\$(CCBS)\$
Mobile Assisted Frequency Allocation	\$(MAFA)\$
Network Indication of Alerting in MS	\$(NIA)\$

0 Scope

This European Telecommunication Standard (ETS) specifies the procedures used at the radio interface (Reference Point Um, (see GSM 04.02) for Call Control (CC), Mobility Management (MM) and Radio Resource (RR) management.

When the notations for "further study" or "FS" or "FFS" are present in this ETS they mean that the indicated text is not a normative portion of this standard.

These procedures are defined in terms of messages exchanged over the control channels of the radio interface. The control channels are described in GSM 04.03.

The structured functions and procedures of this protocol and the relationship with other layers and entities are described in general terms in GSM 04.07.

0.1 Scope of the Technical Specification

The procedures currently described in this ETS are for the call control of circuit-switched connections, mobility management and radio resource management.

GSM 04.10 contains functional procedures for support of supplementary services.

GSM 04.11 contains functional procedures for support of point-to-point short message services.

GSM 04.12 contains functional description of short message - cell broadcast.

NOTE 1: "layer 3" includes the functions and protocols described in the present document.

The terms "data link layer" and "layer 2" are used interchangeably to refer to the layer immediately below layer 3.

0.2 Application to the interface structures

The layer 3 procedures apply to the interface structures defined in GSM 04.03. They use the functions and services provided by layer 2 defined in GSM 04.05 and GSM 04.06. GSM 04.07 gives the general description of layer 3 including procedures, messages format and error handling.

0.3 Structure of layer 3 procedures

A building block method is used to describe the layer 3 procedures.

The basic building blocks are "elementary procedures" provided by the protocol control entities of the three sublayers, i.e. radio resource management, mobility management and connection management sublayer.

Complete layer 3 transactions consist of specific sequences of elementary procedures. The term "structured procedure" is used for these sequences.

0.4 Test procedures

Test procedures of the GSM radio interface signalling are described in GSM 11.10 and GSM 11.2x series.

0.5 Use of logical channels

The logical control channels are defined in GSM 05.02. In the following those control channels are considered which carry signalling information or specific types of user packet information:

- i) Broadcast Control CHannel (BCCH): downlink only, used to broadcast Cell specific information;
- ii) Synchronization CHannel (SCH): downlink only, used to broadcast synchronization and BSS identification information;