SLOVENSKI STANDARD
SIST ETS 300 587-2 E1:2003

01-december-2003

Evropski digitalni celiļ ni telekomunikacijski sistem (faza 2) ï Vmesnik za sistem baznih postaj ï komutacija mobilnih storitev (BSS-MSC) ï Naļ ela za vmesnik (GSM 08.02)

European digital cellular telecommunications system (Phase 2); Base Station System - Mobile-services Switching Centre (BSS - MSC) interface; Interface principles (GSM 08.02)

Ta slovenski standard je istoveten z: **ETS 300 587-2 Edition 1**

ICS:

33.070.50	Globalni sistem za mobilno telekomunikacijo (GSM)	Global System for Mobile Communication (GSM)

SIST ETS 300 587-2 E1:2003 **en**

EUROPEAN TELECOMMUNICATION STANDARD

ETS 300 587-2

September 1994

Source:ETSI TC-SMG

Reference:GSM 08.02

ICS: 33.060.30

Key words: European digital cellular telecommunications system, Global System for Mobile communications (GSM)

European digital cellular telecommunications system (Phase 2); Base Station System - Mobile-services Switching Centre (BSS - MSC) interface Interface principles (GSM 08.02)

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New presentation - see History box

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Foreword

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

This ETS gives the interface principles Base Station System (BSS) to Mobile-services Switching Centre (MSC) interface. This ETS corresponds to GSM technical specification GSM 08.02 version 4.1.1.

The specification from which this ETS has been derived was originally based on CEPT documentation, hence the presentation of this ETS may not be entirely in accordance with the ETSI/PNE rules.

Reference is made within this ETS to GSM-TSs (NOTE).

Reference is also made within this ETS to GSM xx.xx. series. The specifications in the series can be identified, with their full title, within the normative reference Clause of this ETS by the first two digits of their GSM reference number e.g. GSM 09.xx series, refers to GSM 09.01, GSM 09.02, etc.

NOTE: TC-SMG has produced documents which give the technical specifications for the implementation of the European digital cellular telecommunications system. Historically, these documents have been identified as GSM Technical Specifications (GSM-TSs). These TSs may have subsequently become I-ETSs (Phase 1), or ETSs (Phase 2), whilst others may become ETSI Technical Reports (ETRs). GSM-TSs are, for editorial reasons, still referred to in GSM ETSs.

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1 General

1.1 Scope

This Technical Specification gives the principles on which the detailed interface specifications in the rest of the GSM 08.0X series of Technical Specifications are based.

The set of fixed equipment accessed from the MSC through one particular instance of the interface will be later referred to as a Base station system (BSS). A BSS ensures the coverage of n cells, where n can be 1 or more.

The function of a BSS may be further subdivided into a control function, performed by one base station controller (BSC) and a transceiving function,performed by "n" base transceiver station equipments (BTS), one for each cell. However, the study of such a split is outside the scope of the 08.0x series of Technical Specifications, where the BSS will be considered as a whole.

The BSS-MSC interface defined in the GSM 08 series of Technical Specifications is designed to support a wide range of possible architectures on both sides. Characteristics like the physical location of the transcoders/rate adaptation inside the BSS (either integrated into the transceivers or very near to the MSC) or the use of traffic or signalling concentration at either side are left to the operators choice. Annex A to this Technical Specification contains guidance information concerning the use of remote mobile switching units, which for the purposes of this specification are considered as part of the MSC.

Direct connection between two BSSs is not supported by this interface.

This interface is based on the use of 1 or more 2048 kbit/s digital transmission system interfaces. Each 2048 kbit/s interface provides 31*64 kbit/s channels which can be used for traffic or signalling as the operator requires.

The signalling is layered, terminology similar to that in the OSI reference model is used in this series, however the layers referred to are not identical to the equivalently named layer in the OSI model.

This interface is defined at the boundary of the MSC and has a per channel bit rate of 64 kbit/s, but the net radio path traffic channel is at a rate of less than 16 kbit/s. A transcoder or rate adapter function is thus needed for the rate conversion. The interface is designed such that the transcoding or rate adaptation function may be geographically situated at either the MSC site or the BSS site, however the transcoder is considered to be part of the BSS.

The interface has been designed around the aims of Technical Specification GSM 08.01 allowing each component and the system as a whole to evolve.

1.2 Normative references

This ETS incorporates by dated and undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this ETS only when incorporated in it by amendment or revision. For undated references, the latest edition of the publication referred to applies.

[1] GSM 01.04 (ETR 100): "European digital cellular telecommunications system (Phase 2); Abbreviations and acronyms".

[2] GSM 03.09 (prETS 300 527): "European digital cellular telecommunications system (Phase 2); Handover procedures".

[3] GSM 03.10 (prETS 300 528): "European digital cellular telecommunications system (Phase 2); GSM Public Land Mobile Network (PLMN) connection types".

[4] GSM 03.20 (prETS 300 534): "European digital cellular telecommunications system (Phase 2); Security related network functions".

[5] GSM 04.08 (prETS 300 557): "European digital cellular telecommunications system (Phase 2); Mobile radio interface layer 3 specification".

[6] GSM 08.01 (prETS 300 587-1): "European digital cellular telecommunications system (Phase 2); Base Station System - Mobile Switching Centre (BSS - MSC) interface General aspects".

[7] GSM 08.04 (prETS 300 588): "European digital cellular telecommunications system (Phase 2); Base Station System - Mobile-services Switching Centre (BSS - MSC) interface Layer 1 specification".

[8] GSM 08.06 (prETS 300 589): "European digital cellular telecommunications system (Phase 2); Signalling transport mechanism specification for the Base Station System - Mobile-services Switching Centre (BSS - MSC) interface".

[9] GSM 08.08 (prETS 300 590): "European digital cellular telecommunications system (Phase 2); Mobile Switching Centre - Base Station System (MSC - BSS) interface Layer 3 specification".

[10] GSM 08.20 (prETS 300 591): "European digital cellular telecommunications system (Phase 2); Rate adaption on the Base Station System - Mobile-services Switching Centre (BSS - MSC) interface".

[11] GSM 08.51 (prETS 300 592): "European digital cellular telecommunications system (Phase 2); Base Station Controller - Base Transceiver Station (BSC - BTS) interface General aspects".

[12] GSM 08.52 (prETS 300 593): "European digital cellular telecommunications system (Phase 2); Base Station Controller - Base Transceiver Station (BSC - BTS) interface Interface principles".

[13] GSM 08.54 (prETS 300 594): "European digital cellular telecommunications system (Phase 2); Base Station Controller - Base Transceiver Station (BSC - BTS) interface Layer 1 structure of physical circuits".

[14] GSM 08.56 (prETS 300 595): "European digital cellular telecommunications system (Phase 2); Base Station Controller - Base Transceiver Station (BSC - BTS) interface Layer 2 specification".

[15] GSM 08.58 (prETS 300 596): "European digital cellular telecommunications system (Phase 2); Base Station Controller - Base Transceiver Station (BSC - BTS) interface Layer 3 specification".

[16] GSM 08.60 (prETS 300 597): "European digital cellular telecommunications system (Phase 2); Inband control of remote transcoders and rate adaptors".

[17] GSM 08.61 (prETS 300 598): "European digital cellular telecommunications system (Phase 2); Inband control of remote transcoders and rate adaptors (half rate)".

[18] GSM 12.01 (prETS 300 612-2): "European digital cellular telecommunications system (Phase 2); Common aspects of GSM Network Management (NM)".

1.3 Definitions and abbreviations

Abbreviations used in this specification are listed in GSM 01.04