



SLOVENSKI STANDARD

SIST ETS 300 580-3 E2:2003

01-december-2003

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Digital cellular telecommunications system (Phase 2) (GSM); Full rate speech; Part 3: Substitution and muting of lost frames for full rate speech channels (GSM 06.11 version 4.0.6)

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Ta slovenski standard je istoveten z: **ETS 300 580-3 Edition 2**

ICS:

33.070.50	Globalni sistem za mobilno telekomunikacijo (GSM)	Global System for Mobile Communication (GSM)
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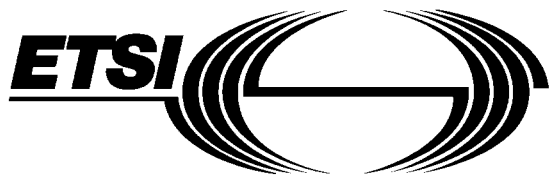
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Full rate speech;

**Part 3: Substitution and muting of lost frames for
full rate speech channels
(GSM 06.11 version 4.0.6)**

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Foreword

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

This ETS specifies the substitution and muting of lost frames for full rate speech channels for the digital cellular telecommunications system (Phase2).

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.

Transposition dates	
Date of adoption of this ETS:	3 April 1998
Date of latest announcement of this ETS (doa):	30 June 1998
Date of latest publication of new National Standard or endorsement of this ETS (dop/e):	31 December 1998
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0.1 Scope

This technical specification defines a frame substitution and muting procedure which shall be used by the RX DTX handler when one or more lost speech or SID frames are received from the radio subsystem.

The requirements of this technical specification are mandatory for implementation in all GSM Base Station Systems and Mobile Stations.

0.2 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): "Digital cellular telecommunications system (Phase 2); Abbreviations and acronyms".
- [2] GSM 06.10 (ETS 300 580-2): "Digital cellular telecommunications system (Phase 2); Full rate speech transcoding".
- [3] GSM 06.31 (ETS 300 580-5): "Digital cellular telecommunications system (Phase 2); Discontinuous Transmission (DTX) for full rate speech traffic channel".

0.3 Abbreviations

Abbreviations used in this specification are listed in GSM 01.04.

1 General

The definitions of terms used in this technical specification can be found in GSM 06.31.

The purpose of the frame substitution is to conceal the effect of lost frames.

The purpose of muting the output in the case of several lost frames is to indicate the breakdown of the channel to the user.

2 Requirements

2.1 First lost speech frame

Normal decoding of lost speech frames would result in very unpleasant noise effects. In order to improve the subjective quality, the first lost speech frame shall be substituted with either a repetition or an extrapolation of the previous good speech frame(s). Lost speech frames shall not be delivered to the speech decoder, nor shall the output be muted directly.

2.2 Subsequent lost speech frames

For subsequent lost speech frames, a muting technique shall be used that will gradually decrease the output level, resulting in silencing of the output after a maximum of 320 ms. Section 3 gives an example solution.

2.3 First lost SID frame

A single lost SID frame shall be substituted by the last valid SID frame and the procedure for valid SID frames be applied as described in GSM 06.31.