



SLOVENSKI STANDARD
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Digital cellular telecommunications system; Substitution and muting of lost frames for Enhanced Full Rate (EFR) speech traffic channels (GSM 06.61 version 5.1.2)

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ICS:

33.070.50	Globalni sistem za mobilno telekomunikacijo (GSM)	Global System for Mobile Communication (GSM)
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ETS 300 727

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**Digital cellular telecommunications system;
Substitution and muting of lost frames for Enhanced
Full Rate (EFR) speech traffic channels
(GSM 06.61 version 5.1.2)**

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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 defines a frame substitution and muting procedure which is used by the Receive (RX) Discontinuous Transmission (DTX) handler when one or more lost speech or Silence Descriptor (SID) frames are received from the Radio Sub System (RSS) within the digital cellular telecommunications system.

This ETS corresponds to GSM technical specification, GSM 06.61, version 5.1.2.

Transposition dates	
Date of adoption:	28 February 1997
Date of latest announcement of this ETS (doa):	31 July 1997
Date of latest publication of new National Standard or endorsement of this ETS (dop/e):	31 January 1998
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1 Scope

This European Telecommunication Standard (ETS) defines a frame substitution and muting procedure which shall be used by the Receive (RX) Discontinuous Transmission (DTX) handler when one or more lost speech or Silence Descriptor (SID) frames are received from the Radio Sub System (RSS).

The requirements of this ETS are mandatory for implementation in all GSM Base Station Systems (BSS)s and Mobile Stations (MS)s capable of supporting the enhanced Full Rate speech traffic channel. It is not mandatory to follow the bit exact implementation outlined in this ETS and the corresponding C-source code.

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 05.03 (ETS 300 575): "Digital cellular telecommunications system (Phase 2); Channel coding".
- [2] GSM 06.60 (ETS 300 726): "Digital cellular telecommunications system; Enhanced Full Rate (EFR) speech transcoding".
- [3] GSM 06.81 (ETS 300 729): "Digital cellular telecommunications system; Discontinuous transmission (DTX) for Enhanced Full Rate (EFR) speech traffic channels".
- [4] GSM 08.60 (ETS 300 737): "Digital cellular telecommunications system (Phase 2+); Inband control of remote transcoders and rate adaptors for Enhanced Full Rate (EFR) and full rate traffic channels".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of this ETS, the following definition applies:

5-point median operation: Consists of sorting the 5 elements belonging to the set for which the median operation is to be performed in an ascending order according to their values, and selecting the third largest value of the sorted set as the median value.

Further definitions of terms used in this ETS can be found in GSM 06.60 (ETS 300 726) [2], GSM 06.81 (ETS 300 729) [3], GSM 05.03 (ETS 300 575)[1] and GSM 08.60 (ETS 300 737) [4].

3.2 Abbreviations

For the purposes of this ETS, the following abbreviations apply:

BFI	Bad Frame Indication from Radio Sub System
BSI_Abis	Bad Sub-block Indication obtained from A-bis CRC checks
PrevBFI	Bad Frame Indication of Previous frame
RSS	Radio Sub System
RX	Receive
DTX	Discontinuous transmission
SID	Silence Descriptor frame
CRC	Cyclic Redundancy Check
CCU	Channel Coding Unit
median5	5-point median operation
TRAU	Transcoding Rate Adaptation Unit