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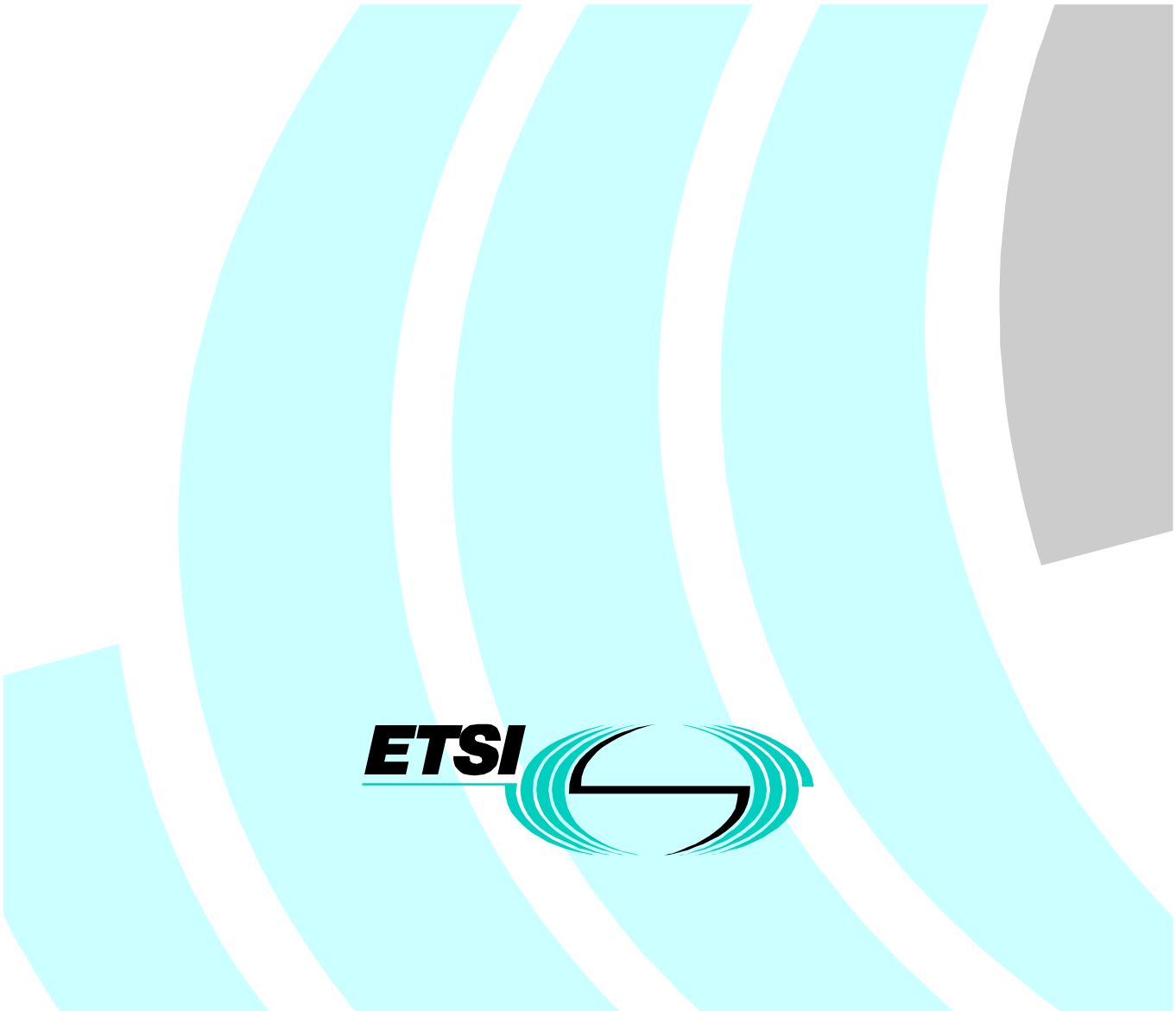
European Standard (Telecommunications series)

Transmission and Multiplexing (TM); Functional characteristics of 2 048 kbit/s interfaces



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Contents

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Foreword

This European Standard (Telecommunications series) has been produced by ETSI Technical Committee Transmission and Multiplexing (TM), and is now submitted for the ETSI standards One-step Approval Procedure.

The present document aims at providing inter-vendor and inter-operator compatibility for synchronous frame structures based on ITU-T Recommendations G.704 [1] used at primary hierarchical levels and G.706 [2] on frame alignment and Cyclic Redundancy Check (CRC) procedures relating to basic frame structures defined in ITU-T Recommendation G.704 [1].

The conformance testing requirements corresponding to the specifications contained in the present document are to be specified in a different EN.

Proposed national transposition dates	
Date of latest announcement of this EN (doa):	3 months after ETSI publication
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	6 months after doa
Date of withdrawal of any conflicting National Standard (dow):	6 months after doa

1 Scope

The present document describes the synchronous frame structures and Cyclic Redundancy Check (CRC) relevant to 2 048 kbit/s interfaces based on ITU-T Recommendations G.704 [1].

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication and/or edition number or version number) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.

[1] ITU-T Recommendation G.704 (1998): "Synchronous frame structures used at 1544, 6312, 2048, 8448 and 44 736 kbit/s hierarchical levels".

[2] ITU-T Recommendation G. 706 (1991): "Frame alignment and cyclic redundancy check (CRC) procedures relating to basic frame structures defined in Recommendation G.704"

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the following terms and definitions apply:

N = normative: requirements with which it is necessary to comply in order to be able to claim compliance with the present document
Therefore, functions and features in clauses of ITU-T Recommendation G. 703 [2], stated as being normative in the present document, shall be implemented and followed even if the text is given as a recommendation or an example.

I = informative: text provided for information only
Titles for clauses are marked as informative when the requirements are given in further clauses.

N/R = not relevant: clause which is not relevant to the present document

3.2 Abbreviations

For the purposes of the present document, the following abbreviations apply:

CRC	Cyclic Redundancy Check

4 Requirements

Table 1: Modifications and statements to ITU-T Recommendation G.704 [1]

Clause	Title	Statement
1	General	N
2	Basic frame structures	I
2.1	Basic frame structure at 1 544 kbit/s	N/R
2.2	Basic frame structure at 6 312 kbit/s	N/R
2.3	Basic frame structure at 2 048 kbit/s	N
2.4	Basic frame structure at 8 448 kbit/s	N/R
2.5	Basic frame structure at 44 736 kbit/s	N/R
3	Characteristics of frame structures carrying channels at various bit rates in 1 544 kbit/s	N/R
4	Characteristics of frame structures carrying channels at various bit rates in 6 312 kbit/s	N/R
5	Characteristics of frame structures carrying channels at various bit rates in 2 048 kbit/s interfaces	N
5.1	Interface at 2 048 kbit/s carrying 64 kbit/s channels	I
5.1.1	Frame structure	N
5.1.2	Use of other 64 kbit/s channel time slots	N
5.1.3	Signalling	N
5.2	Interface at 2 048 kbit/s carrying n x 64 kbit/s	N
5.2.1	One n x 64 kbit/s signal on the tributary side of a multiplex equipment	N (note)
5.2.2	One or more n x 64 kbit/s signals on the multiplexed signal side of a multiplexing equipment	N (note)
6	Characteristics of frame structures carrying channels at various bit rates in 8 448 kbit/s interface	N/R
Annex A	Examples of CRC implementations using shift registers	
A.1	CRC-6 procedure for interface at 1 544 kbit/s	N/R
A.2	CRC-5 procedure for interface at 6 312 kbit/s	N/R
A.3	CRC-4 procedure for interface at 2 048 kbit/s	I
Annex B	Alphabetical list of abbreviations used in this Recommendation	I
NOTE: Inside the network of a network operator the time slots composing an n x 64 kbit/s signal need not be contiguous.		

History

Document history		
Edition 1	August 1993	Publication
V1.2.1	April 2001	One-step Approval Procedure OAP 20010831: 2001-05-02 to 2001-08-31