# ISO 21219-5:2019 (E)

## Intelligent transport systems — Traffic and travel information (TTI) via transport protocol experts group, generation 2 (TPEG2) — Part 5: Service framework (TPEG2-SFW)

# Contents


Foreword

Introduction

1 Scope

2 Normative references

3 Terms and definitions

4 Abbreviated terms

5 General — TPEG

5.1 TPEG transmission
5.2 TPEG roles
5.3 TPEG layer model
5.4 Design principles

6 Description of TPEG Multiplex and TPEG Structures

6.1 Overview
6.2 TPEG Transport level
6.3 TPEG Service level
6.3.1 General
6.3.2 TPEG Service structure
6.3.3 Service level attributes description
6.3.3.1 Service Encryption Indicator
6.3.3.2 Service identification
6.4 TPEG Service Component level
6.4.1 Service Component structure

Annex A (normative) TPEG-Binary Representation of Framework Structures

A.1 General definitions
A.2 TPEG data stream description
A.2.1 Diagrammatic hierarchy representation of frame structure
A.2.2 Syntactical representation of the TPEG stream
A.2.2.1 TPEG Transport Frame
A.2.2.1.1 Structure
A.2.2.1.2 TPEG Transport Frame attributes
A.2.2.1.3 Synchronization method
A.2.2.2 TPEG Service Frame template structure
A.2.2.3 Service Frame of frame type = 0 (Stream Directory Frame)
A.2.2.3.1 Structure
A.2.2.3.2 Attributes
A.2.2.4 Service Frame of frame type = 1 (Service Data Frame)
A.2.2.5 TPEG Service Component Multiplex
A.2.2.6 Interface to application specific Service Component Frames
A.2.2.6.1 TPEG Base Service Component Frame structure
A.2.2.6.2 TPEG specialized Service Component data schemata
A.2.2.6.2.1 Service Component Data with dataCRC
A.2.2.6.2.2 Service Component Data with dataCRC and messageCount
A.2.2.6.2.3 Service Component Data with dataCRC and groupPriority
A.2.2.6.2.4 Service Component Frame with dataCRC, groupPriority, and messageCount

A.2.3 Service Component level attributes
A.2.3.1 Service Component Identifier
A.2.3.2 Field Length
A.2.3.3 Service Component Header CRC
A.2.3.4 Service Component Data CRC

Annex B (normative) tpegML Representation of Framework Structures

B.1 Introduction
B.2 TPEG XML document structure
B.2.1 Diagrammatic hierarchy representation of the document structure
B.2.2 Syntactical schema representation of the tpegML document
B.2.2.1 Document headers
B.2.2.2 Special data types and tags
B.2.2.2.1 XML Attributes
B.2.2.2.2 TPEG Binary Data Type
B.2.2.3 TPEG Document
B.2.2.4 Transport Frame Level
B.2.2.5 Transport Frame Binary Representation
B.2.2.6 Stream Directory
B.2.2.7 Service Frame Level
B.2.2.7.1 Service Identification
B.2.2.7.2 Service Encryption Indicator
B.2.2.7.3 Service Component Multiplex
B.2.2.8 Service Component Level
B.2.2.9 Service Component Binary Representation
B.2.2.10 Service Component Frame Content
B.2.2.10.1 Service Component Identifier
B.2.2.10.2 Priority
B.2.2.10.3 Message Count
B.2.2.10.4 Application Root Message Level
B.2.2.10.5 Application Root Message Binary Representation
B.2.2.10.6 Application Root Message XML Representation
B.3 XML example document
B.4 Full tpegML XSD Schema Definition

Annex C (normative) SID administrative procedures

C.1 SIDs for TPEG technical tests
C.2 SIDs for TPEG public tests
C.3 SIDs for TPEG regular public services

Annex D (normative) CRC calculation

D.1 CRC calculation
D.2 ITU-T (formerly CCITT) CRC calculation in PASCAL
D.3 ITU-T (formerly CCITT) CRC calculation in C notation

**Page count: 42**