

# ISO 21219-18:2019 (E)

## Intelligent transport systems — Traffic and travel information (TTI) via transport protocol experts group, generation 2 (TPEG2) — Part 18: Traffic flow and prediction application (TPEG2-TFP)

---

### Contents

	Foreword
	Introduction
1	Scope
2	Normative references
3	Terms and definitions
4	Abbreviated terms
5	Application specific constraints
5.1	Application identification
5.2	Version number signalling
5.3	Ordered components
5.4	Extendibility
5.5	TPEG Service Component Frame
6	TFP structure
7	TFP Message components
7.1	TFPMessage
7.2	TFPMethod
7.3	MMCSwitch
7.4	MessageManagementContainerLink
7.5	MMCMasterLink
7.6	MMCPartLink
7.7	LocationReferencingContainer
7.8	FlowPolygonObject
7.9	FlowPolygon
7.10	FlowStatus
7.11	FlowMatrix
7.12	FlowVector
7.13	SectionExtensionComponent
7.14	RestrictionExtensionComponent
7.15	StatusExtensionComponent
7.16	StatisticsExtensionComponent
8	TFP Data Types
8.1	General
8.2	FlowVectorSection
8.3	PolygonPoint
8.4	LinkedCause
8.5	StatusParameters
8.6	Restrictions
8.7	StatisticalParameters
9	TFP Tables
9.1	tfp001: VehicleClass
9.2	tfp002: VehicleCredentials
9.3	tfp003: LevelOfService

- 9.4 tfp004: SpatialResolution
- 9.5 tfp005: LaneRestriction
- 9.6 tfp006: CauseCode
- 9.7 tfp007: SectionType
- 9.8 tfp008: FlowDataQuality

**Annex A (normative) Traffic Flow and Prediction, TPEG-Binary Representation**

- A.1 General
- A.2 Message components
  - A.2.1 List of Generic Component Ids
  - A.2.2 TFPMessage
  - A.2.3 TFPMethod
  - A.2.4 MMCSwitch
  - A.2.5 MessageManagementContainerLink
  - A.2.6 MMCMasterLink
  - A.2.7 MMCPartLink
  - A.2.8 LocationReferencingContainer
  - A.2.9 FlowPolygonObject
  - A.2.10 FlowPolygon
  - A.2.11 FlowStatus
  - A.2.12 FlowMatrix
  - A.2.13 FlowVector
  - A.2.14 SectionExtensionComponent
  - A.2.15 RestrictionExtensionComponent
  - A.2.16 StatusExtensionComponent
  - A.2.17 StatisticsExtensionComponent
- A.3 TFP data types
  - A.3.1 FlowVectorSection
  - A.3.2 PolygonPoint
  - A.3.3 LinkedCause
  - A.3.4 StatusParameters
  - A.3.5 Restrictions
  - A.3.6 StatisticalParameters

**Annex B (normative) Traffic Flow and Prediction, TPEG-ML Representation**

- B.1 General
- B.2 Message Components
  - B.2.1 TFP Message
  - B.2.2 TFP Method
  - B.2.3 FlowPolygonObject
  - B.2.4 FlowPolygon
  - B.2.5 FlowStatus
  - B.2.6 FlowMatrix
  - B.2.7 FlowVector
  - B.2.8 SectionExtensionComponent
  - B.2.9 StatusExtensionComponent
  - B.2.10 RestrictionExtensionComponent
  - B.2.11 StatisticsExtensionComponent
  - B.2.12 MMCSwitch
- B.3 Data Types
  - B.3.1 FlowVectorSection
  - B.3.2 PolygonPoint
  - B.3.3 LinkedCause
  - B.3.4 StatusParameters
  - B.3.5 Restrictions
  - B.3.6 StatisticalParameters
- B.4 Full Schema Definition