

# ISO 21219-15:2023-05 (E)

## Intelligent transport systems - Traffic and travel information (TTI) via transport protocol experts group, generation 2 (TPEG2) - Part 15: Traffic event compact (TPEG2-TEC)

<b>Contents</b>		<b>Page</b>
Foreword .....		v
Introduction .....		vi
1	Scope .....	1
2	Normative references .....	1
3	Terms and definitions .....	1
4	Abbreviated terms .....	2
5	Application specific constraints .....	2
5.1	Application identification .....	2
5.2	Version number signalling .....	2
5.3	Ordered components .....	3
5.4	Extension .....	3
5.5	TPEG service component frame .....	4
6	TEC structure .....	4
7	TEC message components .....	6
7.1	TECMessage .....	6
7.2	MMCSwitch .....	6
7.3	MessageManagement .....	6
7.4	Event .....	7
7.4.1	Effect and Cause .....	8
7.4.2	LengthAffected .....	8
7.4.3	startTime and stopTime .....	8
7.4.4	Speed Attributes .....	8
7.4.5	At Grade Junction Closure .....	9
7.4.6	Rounding of speed information .....	9
7.5	ProblemLocation .....	10
7.6	RestrictionLocation .....	10
7.7	SegmentLocation .....	10
7.8	Cause .....	10
7.9	DirectCause .....	10
7.10	Causes and subCauses .....	12
7.11	LinkedCause .....	12
7.11.1	General .....	12
7.11.2	Rules .....	12
7.11.3	Further constraints .....	13
7.11.4	Coding examples .....	13
7.12	Advice .....	13
7.13	VehicleRestriction .....	13
7.14	DiversionRoute .....	14
7.14.1	Description for creating and applying diversions .....	14
7.14.2	Strategy for coding a diversion .....	14
7.15	TemporarySpeedLimit .....	15

8	TEC Datatypes .....	16
8.1	LaneNumber .....	16
8.2	RestrictionType .....	17
8.3	SegmentModifier .....	17
8.4	TemporarySpeedLimitSection .....	17
9	TEC Tables .....	18
9.1	tec001:EffectCode .....	18
9.2	tec002:CauseCode .....	18
9.3	tec003:WarningLevel .....	20
9.4	tec004:LaneRestriction .....	21
9.5	tec005:AdviceCode .....	21
9.6	tec006:Tendency .....	22
9.7	tec007:RestrictionType .....	23
9.8	tec008:DiversionRoadType .....	24
9.9	tec009:VehicleType .....	24
9.10	tec010:AtGradeJunctionClosure .....	25
9.11	tec100:SubCauseType .....	26
9.12	tec101:TrafficCongestion .....	27
9.13	tec102:Accident .....	27
9.14	tec103:Roadworks .....	27
9.15	tec104:NarrowLanes .....	28
9.16	tec105:Impassability .....	28
9.17	tec106:SlipperyRoad .....	29
9.18	tec108:Fire .....	29
9.19	tec109:HazardousDrivingConditions .....	30
9.20	tec110:ObjectsOnTheRoad .....	30
9.21	tec111:AnimalsOnRoadway .....	31
9.22	tec112:PeopleOnRoadway .....	31
9.23	tec113:BrokenDownVehicles .....	31
9.24	tec115:RescueAndRecoveryWorkInProgress .....	32
9.25	tec116:RegulatoryMeasure .....	32
9.26	tec117:ExtremeWeatherConditions .....	33
9.27	tec118:VisibilityReduced .....	33
9.28	tec119:Precipitation .....	34
9.29	tec120:RecklessPersons .....	34
9.30	tec123:MajorEvent .....	35
9.31	tec124:ServiceNotOperating .....	35
9.32	tec125:ServiceNotUseable .....	36
9.33	tec126:SlowMovingVehicles .....	36
9.34	tec127:DangerousEndOfQueue .....	36
9.35	tec128:RiskOfFire .....	37
9.36	tec129:TimeDelay .....	37
9.37	tec130:PoliceCheckpoint .....	38
9.38	tec131:MalfunctioningRoadsideEquipment .....	38
9.39	tec200:SubAdviceType .....	38
9.40	tec202:OvertakingNotAllowed .....	39
9.41	tec203:DrivingNotAllowed .....	39
9.42	tec207:GiveWayToVehiclesFromBehind .....	39
9.43	tec208:FollowDiversion .....	40
9.44	tec213:DriveCarefully .....	40
9.45	tec214:DoNotLeaveYourVehicle .....	40
9.46	tec216:UseTollLanes .....	41
	Annex A (normative) TPEG TEC, TPEG-Binary Representation .....	42
	Annex B (normative) TPEG application, TPEG-ML Representation .....	51
	Annex C (informative) TPEG application, TEC message coding examples .....	65
	Bibliography .....	80