

# ISO/TS 21219-22:2017-06 (E)

## Intelligent transport systems - Traffic and travel information (TTI) via transport protocol experts group, generation 2 (TPEG2) - Part 22: OpenLR location referencing (TPEG2-OLR)

---

<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 .....	3
5	Toolkit specific constraints .....	4
5.1	Version number signalling .....	4
5.2	Extension .....	4
6	OLR structure .....	4
6.1	Location types .....	4
6.1.1	Supported location types .....	4
6.1.2	Linear locations .....	5
6.1.3	Point locations .....	6
6.1.4	Area locations .....	8
6.2	Requirements .....	11
6.2.1	General .....	11
6.2.2	Map requirements .....	11
6.2.3	Location properties .....	12
6.3	Logical data format specification .....	13
6.3.1	General .....	13
6.3.2	Building blocks .....	14
6.3.3	Additional data .....	18
6.3.4	Location reference point .....	20
6.4	Data format rules .....	26
6.4.1	OpenLRTM rules .....	26
6.4.2	Overview of the data format rules .....	27
6.5	Physical representations of geo-coordinates .....	28
6.5.1	General .....	28
6.5.2	Absolute geo-coordinates .....	28
6.5.3	Relative geo-coordinates .....	28
7	OLR message components .....	29
7.1	OpenLRLocationReference .....	29
7.2	AbstractLocationReference .....	29
7.3	LinearLocationReference .....	30
7.4	GeoCoordinateLocationReference .....	30
7.5	PointAlongLineLocationReference .....	31
7.6	POIWithAccessPointLocationReference .....	32
7.7	CircleLocationReference .....	33
7.8	PolygonLocationReference .....	34
7.9	RectangleLocationReference .....	35

7.10	GridLocationReference .....	35
7.11	ClosedLinearLocationReference .....	36
7.12	LineProperties .....	37
7.13	PathProperties .....	38
7.14	LocationDescription .....	38
7.15	AbstractShape .....	38
7.16	Shape .....	38
7.17	Path .....	39
8	OLR datatypes .....	39
8.1	AbsoluteGeoCoordinate .....	39
8.2	RelativeGeoCoordinate .....	39
8.3	Bearing .....	39
8.4	DistanceMetresMax15000 .....	40
8.5	FirstLocationReferencePoint .....	40
8.6	IntermediateLocationReferencePoint .....	40
8.7	LastLocationReferencePoint .....	40
8.8	PointLocationLineReferenceData .....	41
8.9	Rectangle .....	41
9	OLR tables .....	41
9.1	olr001:FunctionalRoadClass .....	41
9.2	olr002:FormOfWay .....	42
9.3	olr003:Orientation .....	42
9.4	olr004:SideOfRoad .....	42
Annex A (normative) TPEG application, TPEG-Binary Representation .....		43
Annex B (normative) TPEG application, TPEG-ML Representation .....		51
Bibliography .....		59