

DIN EN 16157-2:2017-07 (E)

Erscheinungsdatum: 2017-06-16

Intelligent transport systems - DATEX II data exchange specifications for traffic management and information - Part 2: Location referencing; English version prEN 16157-2:2017

Contents

	Page
European foreword	5
Introduction	6
1 Scope	7
2 Normative references	8
3 Terms and definitions	9
4 Symbols and abbreviations	12
5 Conformance	13
6 UML notation	13
7 The DATEX II location referencing model	14
7.1 General	14
7.1.1 The package "LocationReference"	14
7.1.2 The package "TpegDescriptor"	16
7.2 Point locations	17
7.2.1 The package "PointLocation"	17
7.2.2 The package "AlertCMethod2Point"	19
7.2.3 The package "AlertCMethod4Point"	21
7.2.4 The package "PointCoordinates"	22
7.2.5 The package "TpegPointLocation"	23
7.2.6 The package "PointAlongLinearElement"	25
7.2.7 The package "OpenlrPoint"	28
7.3 Linear locations	30
7.3.1 The package "LinearLocation"	30
7.3.2 The package "AlertCMethod2Linear"	32
7.3.3 The package "AlertCMethod4Linear"	34
7.3.4 The package "AlertCLinearByCode"	35
7.3.5 The package "TpegLinearLocation"	36
7.3.6 The package "LinearWithinLinearElement"	38
7.3.7 The package "OpenlrLinear"	39
7.3.8 The package "GmlLineString"	39
7.4 Area locations	41
7.4.1 The package "AreaLocation"	41
7.4.2 The package "AlertCArea"	42
7.4.3 The package "TpegAreaLocation"	44
7.4.4 The package "OpenlrArea"	45
7.4.5 The package "NamedArea"	47
8 The predefined locations publication	49
8.1 General	49
8.2 The package "PredefinedLocationsPublication"	49
8.2.1 The class model	49
8.2.2 Semantics	50

Annex A (normative) Data dictionary	52
A.1 Overview.....	52
A.2 Data Dictionary for “LocationReference”.....	54
A.2.1 “AlertC” package.....	54
A.2.2 “AlertCArea” package	55
A.2.3 “AlertCLinearByCode” package	56
A.2.4 “AlertCMethod2Linear” package.....	57
A.2.5 “AlertCMethod2Point” package	58
A.2.6 “AlertCMethod4Linear” package.....	58
A.2.7 “AlertCMethod4Point” package.....	59
A.2.8 “AreaLocation” package	59
A.2.9 “GmlLineString” package	62
A.2.10 “LinearLocation” package.....	63
A.2.11 “LinearWithinLinearElement” package.....	64
A.2.12 “LocationReference” package.....	65
A.2.13 “OpenLR” package	68
A.2.14 “OpenlrArea” package.....	70
A.2.15 “OpenlrLinear” package	72
A.2.16 “OpenlrPoint” package	73
A.2.17 “PointAlongLinearElement” package	75
A.2.18 “PointCoordinates” package	79
A.2.19 “PointLocation” package	81
A.2.20 “TpegAreaLocation” package	83
A.2.21 “TpegDescriptor” package.....	84
A.2.22 “TpegLinearLocation” package.....	86
A.2.23 “TpegPointLocation” package	87
A.3 Data Dictionary of <<D2Datatype>> for “LocationReference”.....	90
A.3.1 General	90
A.3.2 The <<D2Datatype>> “AlertCLocationCode”	90
A.3.3 The <<D2Datatype>> “GmlPosList”	90
A.3.4 The <<D2Datatype>> “NutsCode”	90
A.3.5 The <<D2Datatype>> “SubdivisionCode”	90
A.4 Data Dictionary of <<D2Enumeration>> for “LocationReference”	91
A.4.1 General	91
A.4.2 The <<D2Enumeration>> “AlertCDirectionEnum”	91
A.4.3 The <<D2Enumeration>> “AltitudeAccuracyEnum”	91
A.4.4 The <<D2Enumeration>> “AreaPlacesEnum”	93
A.4.5 The <<D2Enumeration>> “CarriagewayEnum”	94
A.4.6 The <<D2Enumeration>> “DirectionEnum”	95
A.4.7 The <<D2Enumeration>> “HeightGradeEnum”	96
A.4.8 The <<D2Enumeration>> “HeightTypeEnum”	97
A.4.9 The <<D2Enumeration>> “LaneEnum”	97
A.4.10 The <<D2Enumeration>> “LinearDirectionEnum”	100
A.4.11 The <<D2Enumeration>> “LinearElementNatureEnum”	101
A.4.12 The <<D2Enumeration>> “LocationDescriptorEnum”	101
A.4.13 The <<D2Enumeration>> “NamedAreaTypeEnum”	103
A.4.14 The <<D2Enumeration>> “NutsCodeTypeEnum”	104
A.4.15 The <<D2Enumeration>> “OpenlrFormOfWayEnum”	105
A.4.16 The <<D2Enumeration>> “OpenlrFunctionalRoadClassEnum”	105
A.4.17 The <<D2Enumeration>> “OpenlrOrientationEnum”	106
A.4.18 The <<D2Enumeration>> “OpenlrSideOfRoadEnum”	106
A.4.19 The <<D2Enumeration>> “PositionConfidenceCodedErrorEnum”	106
A.4.20 The <<D2Enumeration>> “ReferentTypeEnum”	107
A.4.21 The <<D2Enumeration>> “SubdivisionTypeEnum”	108
A.4.22 The <<D2Enumeration>> “TpegLoc01AreaLocationSubtypeEnum”	110
A.4.23 The <<D2Enumeration>> “TpegLoc01FramedPointLocationSubtypeEnum”	110

A.4.24 The <<D2Enumeration>> “TpegLoc01LinearLocationSubtypeEnum”	111
A.4.25 The <<D2Enumeration>> “TpegLoc01SimplePointLocationSubtypeEnum”	111
A.4.26 The <<D2Enumeration>> “TpegLoc03AreaDescriptorSubtypeEnum”	112
A.4.27 The <<D2Enumeration>> “TpegLoc03IlcPointDescriptorSubtypeEnum”	113
A.4.28 The <<D2Enumeration>> “TpegLoc03JunctionPointDescriptorSubtypeEnum”	113
A.4.29 The <<D2Enumeration>> “TpegLoc03OtherPointDescriptorSubtypeEnum”	113
A.4.30 The <<D2Enumeration>> “TpegLoc04HeightTypeEnum”	116
A.5 Data Dictionary for “PredefinedLocationsPublication” —	
“PredefinedLocationsPublication” package.....	117
A.5.1 General	117
A.5.2 “PredefinedLocationsPublication” package classes.....	117
A.5.3 “PredefinedLocationsPublication” package associations.....	117
A.5.4 “PredefinedLocationsPublication” package attributes.....	118
A.6 Data Dictionary of <<D2Datatype>> for “PredefinedLocationsPublication”.....	118
A.7 Data Dictionary of <<D2Enumeration>> for “PredefinedLocationsPublication”	118
Annex B (normative) Referenced XML schemas.....	119
B.1 Overview	119
B.2 The LocationReferencing subschema for location referencing	119
B.3 The D2Payload subschema for PredefinedLocationsPublication.....	119
Annex C (informative) Locations referencing methods	160
C.1 Overall approach	160
C.1.1 General	160
C.1.2 Pre-defined locations	161
C.1.3 GDF features	161
C.1.4 Linear referencing systems	161
C.2 Methods for ALERT-C.....	161
C.2.1 General	161
C.2.2 Primary and secondary locations	161
C.2.3 Pre-defined primary location + extent	162
C.2.4 Pre-defined primary and secondary locations	163
C.2.5 Primary and secondary locations using pre-defined location, extent and distances	164
C.2.6 Primary and secondary locations using Pre-defined locations + distances	164
C.2.7 Explanation for ALERT-C.....	165
C.3 Linear referencing methods	167
C.3.1 Absolute linear referencing methods.....	167
C.3.2 Relative linear referencing methods.....	168
C.3.3 Interpolative linear referencing methods.....	169
C.4 The OpenLR™ location referencing methods	170
C.4.1 Introduction.....	170
C.4.2 Concepts.....	171
C.4.3 Location types	172
Bibliography	182