

DIN EN 12896-1:2016-12 (E)

Public transport - Reference data model - Part 1: Common concepts

Inhalt	Seite
European foreword	5
0 Introduction	6
0.1 Rationale for the Transmodel Standard	6
0.2 Use of the Transmodel Standard	6
0.3 Applicability of the Transmodel Standard	7
0.3.1 General	7
0.3.2 Specification of information architecture	7
0.3.3 Specification of a database	8
0.3.4 Specification of an interface	8
0.4 Conformance statement	8
0.5 Transmodel origins	9
0.5.1 ENV 12896	9
0.5.2 Titan	9
0.5.3 SITP and SITP2	9
0.5.4 CEN TC 278 WG 3 SG 4	9
0.6 Reference to the previous version and other projects and documents	10
0.6.1 General	10
0.6.2 SIRI	10
0.6.3 IFOPT	10
0.6.4 NeTEx	10
0.7 Typographic conventions	10
0.8 Methodology for conceptual modelling	11
0.8.1 General	11
0.8.2 Packages	11
0.8.3 Class diagrams	13
0.8.4 Classes and attributes	14
0.8.5 Association relationships	17
0.8.6 Reflexive association relationship	17
0.8.7 Composition association relationship	18
0.8.8 Aggregation association relationship	18
0.8.9 Generalization association relationship	19
0.9 Summary of rules for Transmodel representation	19
1 Scope	21
1.1 General scope of the Standard	21
1.2 Functional domain description	22
1.2.1 Public transport network and stop description	22
1.2.2 Timing information and vehicle scheduling	22
1.2.3 Passenger information	23
1.2.4 Fare management	23
1.2.5 Operations monitoring and control	24
1.2.6 Management information	24
1.2.7 Multi-modal operation aspects	25
1.2.8 Multiple operators' environment aspects	25
1.2.9 Personnel management: driver scheduling, rostering, personnel disposition	25
1.3 Particular scope of this document	26

2	Normative references	26
3	Terms and definitions	26
4	Abbreviations	29
5	Common concepts domain.....	29
5.1	Introduction to the common concepts	29
5.2	Versions and validity	31
5.2.1	Introduction	31
5.2.2	Version and validity – Model overview	32
5.2.3	Generic entity	32
5.2.4	Generic version	33
5.2.5	Generic version frame	34
5.2.6	Generic validity.....	36
5.2.7	Generic delta model	37
5.3	Responsibility.....	38
5.3.1	Introduction	38
5.3.2	Responsibility – Model overview.....	39
5.3.3	Generic responsibility	39
5.3.4	Responsibility role.....	41
5.3.5	Generic organization	42
5.4	Explicit frames.....	43
5.4.1	Composite frame	44
5.4.2	General frame.....	45
5.4.3	Resource frame.....	46
5.4.4	Service calendar frame	47
5.4.5	Other explicit frames	48
5.5	Generic framework model.....	49
5.5.1	General.....	49
5.5.2	Generic framework – Model overview	49
5.5.3	Location Model.....	49
5.5.4	Generic grouping - Introduction	50
5.5.5	Generic point and link.....	52
5.5.6	Generic point and link sequence	55
5.5.7	Generic zone and feature	56
5.5.8	Generic projection	58
5.5.9	Generic place	63
5.5.10	Accessibility	64
5.6	Reusable Components	67
5.6.1	General.....	67
5.6.2	Reusable components – Model overview	67
5.6.3	Transport Mode	68
5.6.4	Transport Submode	69
5.6.5	Service calendar	69
5.6.6	Availability condition	71
5.6.7	Topographic place	72
5.6.8	Transport organizations.....	73
5.6.9	Additional organizations.....	74
5.6.10	Generic equipment	76
5.6.11	Vehicle type	78
5.6.12	Actual vehicle equipment.....	79
5.6.13	Vehicle passenger equipment	80
5.6.14	Facility.....	81
5.6.15	Train	82
5.6.16	Schematic map	85
5.6.17	Notice.....	86

5.6.18 Service restriction 87
5.6.19 Alternative name 88
Annex A (normative) Data Dictionary 90
Annex B (informative) Status of the Textual Descriptions and Model Evolution 128
Bibliography 132