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Public transport — Network and Timetable Exchange (NeTEx)

Part 1: Public transport network
topology exchange format

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National foreword

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A list of organizations represented on this committee can be obtained on request to its secretary.

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English Version

**Public transport - Network and Timetable Exchange (NeTEx) -
Part 1: Public transport network topology exchange format**

Transport Public - Échanges des informations planifiées
(NeTEx) - Partie 1: Topologie du réseau

Öffentlicher Verkehr - Netzwerk und Fahrplan Austausch
(NeTEx) - Teil 1: Öffentlicher Verkehr Netzwerk Topologie

This Technical Specification (CEN/TS) was approved by CEN on 12 November 2013 for provisional application.

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Foreword

This document (CEN/TS 16614-1:2014) has been prepared by Technical Committee CEN/TC 278 “Intelligent transport systems”, the secretariat of which is held by NEN.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document presents Part 1 of the European Technical Specification known as “NeTEx”. NeTEx provides a framework for specifying communications and data exchange protocols for organisations wishing to exchange scheduled Information relating to public transport operations.

This technical specification is made up of three parts defining a single European Standard series, which provides a complete exchange format for public transport networks, timetable description and fare information.

- Part 1 is the description of the public transport network topology exchange format. It also contains use cases shared with part 2, and modelling rules and the description of a framework shared by all parts.
- Part 2 is the description of the scheduled timetables exchange format.
- Part 3 is the description of the fare information exchange format.¹

Part 1 is fully standalone, and part 2 and 3 rely on part 1.

The XML schema can be downloaded from www.netex.org.uk, along with available guidance on its use, example XML files, and case studies of national and local deployments.

NOTE This document is highly technical, and a special care has been taken on keeping the text readable. This has been done through a set of editorial rules enhancing usual CEN writing rules:

- To avoid confusion with usual wording, Transmodel terms are in capital letters (JOURNEY PATTERN for example).
- To avoid confusion with usual wording, attributes names are in bold/italic style and use camelcase style with no spaces (***JourneyPattern*** for example).
- To avoid confusion with usual wording, attributes types are in italic style and use camelcase style with no spaces (*TypeOfEntity* for example).

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this Technical Specification: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

¹ Currently under development

Introduction

Public transport services rely increasingly on information systems to ensure reliable, efficient operation and widely accessible, accurate passenger information. These systems are used for a range of specific purposes: setting schedules and timetables; managing vehicle fleets; issuing tickets and receipts; providing real-time information on service running, and so on.

This European Technical Specification specifies a Network and Timetable Exchange (NeTEx) standard for Public Transport. It is intended to be used to exchange data relating to scheduled public transport between the systems of PT organisations. It can also be seen as complementary to the SIRI (Service Interface for Real-time Information) standard, as SIRI needs a prior exchange of reference data from NeTEx's scope to provide the necessary context for the subsequent exchange of a real-time data.

Well-defined, open interfaces have a crucial role in improving the economic and technical viability of Public Transport Information Systems of all kinds. Using standardised interfaces, systems can be implemented as discrete pluggable modules that can be chosen from a wide variety of suppliers in a competitive market, rather than as monolithic proprietary systems from a single supplier. Interfaces also allow the systematic automated testing of each functional module, vital for managing the complexity of increasing large and dynamic systems. Furthermore, individual functional modules can be replaced or evolved, without unexpected breakages of obscurely dependent function.

This standard will improve a number of features of public transport information and service management: Interoperability – the standard will facilitate interoperability between information processing systems of the transport operators by: (i) introducing common architectures for message exchange; (ii) introducing a modular set of compatible information services for real-time vehicle information; (iii) using common data models and schemas for the messages exchanged for each service; and (iv) introducing a consistent approach to data management.

Technical advantages include the following: a modular reusing of a common communication layer shared with SIRI for all the various technical services enables cost-effective implementations, and makes the standard readily extensible in future.

1 Scope

1.1 General

NeTEx is dedicated to the exchange of scheduled data (network, timetable and fare information). It is based on Transmodel V5.1 (EN 12896), IFOPT (EN 28701) and SIRI (CEN/TS 15531-4, CEN/TS 15531-5 and prEN 15531-1, prEN 15531-2 and prEN 15531-3²) and supports the exchange of information of relevance for passenger information about public transport services and also for running Automated Vehicle Monitoring Systems (AVMS).

NOTE Many NeTEx concepts are taken directly from Transmodel and IFOPT; the definitions and explanation of these concepts are extracted directly from the respective standard and reused in NeTEx, sometimes with adaptations in order to fit the NeTEx context.

Although the data exchanges targeted by NeTEx are predominantly oriented towards provisioning passenger information systems and AVMS with data from transit scheduling systems, it is not restricted to this purpose and NeTEx can also provide an effective solution to many other use cases for transport data exchange.

1.2 Transport modes

All mass public transport modes are taken into account by NeTEx, including train, bus, coach, metro, tramway, ferry, and their submodes. It is possible to describe airports and air journeys, but there has not been any specific consideration of any additional requirements that apply specifically to air transport.

1.3 Compatibility with existing standards and recommendations

Concepts covered in NeTEx that relate in particular to long-distance train travel include; rail operators and related organizations; stations and related equipment; journey coupling and journey parts; train composition and facilities; planned passing times; timetable versions and validity conditions.

In the case of long distance train the NeTEx takes into account the requirements formulated by the ERA (European Rail Agency) – TAP/TSI (Telematics Applications for Passenger/ Technical Specification for Interoperability, entered into force on 13 May 2011 as the Commission Regulation (EU) No 454/2011), based on UIC directives.

As regards the other exchange protocols, a formal compatibility is ensured with TransXChange (UK), VDV 452 (Germany), NEPTUNE (France), UIC Leaflet, BISON (Netherland) and NOPTIS (Nordic Public Transport Interface Standard).

The data exchange is possible either through dedicated web services, through data file exchanges, or using the SIRI exchange protocol as described in part 2 of the SIRI documentation.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 15531-1, *Public transport - Service interface for real-time information relating to public transport operations - Part 1: Context and framework*³

² Under development

³ Under development (WI 00278340)

EN 15531-2, *Public transport - Service interface for real-time information relating to public transport operations - Part 2: Communications infrastructure*⁴

EN 15531-3, *Public transport - Service interface for real-time information relating to public transport operations - Part 3: Functional service interfaces*⁵

CEN/TS 15531-4, *Public transport - Service interface for real-time information relating to public transport operations - Part 4: Functional service interfaces: Facility Monitoring*

CEN/TS 15531-5, *Public transport - Service interface for real-time information relating to public transport operations - Part 5: Functional service interfaces - Situation Exchange*

EN 12896, *Road transport and traffic telematics - Public transport - Reference data model*

EN 28701, *Intelligent transport systems - Public transport - Identification of Fixed Objects in Public Transport (IFOPT)*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

NOTE A lot of definitions are shared with Transmodel (EN 12896) and IFOPT (EN 28701): special attention was paid to the consistency of definitions, keeping exactly the same wording. The italic bracket name at the beginning of the definition is a package name that will help the reader to find the related concept in the UML data model.

3.1

access

(Generic Place MODEL)

the physical (spatial) possibility for a passenger to access or leave the public transport system. This link may be used during a trip for the walking movement of a passenger from a PLACE (origin of the trip) to a STOP POINT (origin of the PT TRIP), or- the walking movement from a STOP POINT (destination of the PT TRIP) to a PLACE (destination of the trip)

3.2

access end

(Generic Place MODEL)

origin or destination end of an ACCESS link. May indicate a MODE, POINT and PLACE

3.3

access mode

(Reusable Transport Mode MODEL)

a characterisation of the passenger movement according to the means of transport different from public transport (e.g. walk, bicycle, etc)

⁴ Under development (WI 00278341)

⁵ Under development (WI 00278342)

3.4
access space
(*Stop Place MODEL*)

a passenger area within a STOP PLACE such as a concourse or booking hall, immigration hall or security area that is accessible by passengers, but without a direct access to vehicles. Direct access to a VEHICLE is always from a QUAY and/or BOARDING POSITION. An ACCESS SPACE may be a Room, Hall, Concourse, Corridor, or bounded open space within a STOP PLACE

3.5
access zone
(*Site MODEL*)

A ZONE for which the duration to cover any ACCESS LINK to a particular STOP POINT is the same.

3.6
accessibility assessment
(*Accessibility MODEL*)

the accessibility characteristics of an entity used by passengers such as a STOP PLACE, or a STOP PLACE COMPONENT. Described by ACCESSIBILITY LIMITATIONS, and/or a set of SUITABILITIES

3.7
accessibility limitation
(*Accessibility MODEL*)

a categorisation of the accessibility characteristics of a SITE, e.g. a STOP PLACE or a STOP PLACE COMPONENT to indicate its usability by passengers with specific needs, for example, those needing wheelchair access, step-free access or wanting to avoid confined spaces such as lifts. A small number of well-defined categories are used that are chosen to allow the consistent capture of data and the efficient computation of routes for different classes of user

3.8
accommodation
(*Facility MODEL*)

a combination of accommodation characteristics available on a service, e.g. First Class Couchette with shower and 2 bunks

3.9
activated equipment
(*Activation MODEL*)

an equipment activated by the passage of a vehicle at an ACTIVATION POINT or on an ACTIVATION LINK

3.10
activation assignment
(*Activation MODEL*)

an assignment of an ACTIVATION POINT/LINK to an ACTIVATED EQUIPMENT related on its turn to a TRAFFIC CONTROL POINT. The considered ACTIVATION POINT/LINK will be used to influence the control process for that TRAFFIC CONTROL POINT (e.g. to fix priorities as regards the processing of competing requests from different ACTIVATION POINTS/LINKs)

3.11

activation link

(Activation MODEL)

a LINK where a control process is activated when a vehicle passes it

3.12

activation point

(Activation MODEL)

a POINT where a control process is activated when a vehicle passes it. Equipment may be needed for the activation

3.13

actual vehicle equipment

(Actual Vehicle Equipment MODEL)

an item of equipment of a particular type in an individual VEHICLE

3.14

address

(Topographic MODEL)

an address of a PLACE

3.15

administrative zone

(Generic Organisation MODEL)

the area of a district, a region, a city, a municipality, or other area with which an ORGANIZATION has a RESPONSIBILITY ROLE

3.16

allowed line direction

(Route MODEL)

an allowed DIRECTION that can be used on a given ROUTE. This can be used to validate the selection of allowed values

3.17

alternative name

(Site MODEL)

alternative name for the entity

3.18

assistance service

(Local Service Equipment MODEL)

specialisation of LOCAL SERVICE for ASSISTANCE providing information like language, accessibility trained staff, etc.

3.19

authority

(Transport Organisations MODEL)

the organisation under which the responsibility of organising the transport service in a certain area is placed

3.20
availability condition
(Reusable Availability MODEL)

a VALIDITY CONDITION expressed in terms of temporal parameters and referring to DAY TYPEs

3.21
beacon point
(Activation MODEL)

a POINT where a beacon or similar device to support the automatic detection of vehicles passing by is located

3.22
block
(Vehicle Service MODEL)

the work of a vehicle from the time it leaves a PARKING POINT after parking until its next return to park at a PARKING POINT. Any subsequent departure from a PARKING POINT after parking marks the start of a new BLOCK. The period of a BLOCK has to be covered by DUTies

3.23
block part
(Vehicle Service MODEL)

part of a BLOCK corresponding to the different JOURNEY PARTs of the VEHICLE JOURNEYs in a BLOCK

3.24
boarding position
(Stop Place MODEL)

a location within a QUAY from which passengers may directly board, or onto which passengers may directly alight from a VEHICLE

3.25
booking arrangements
(Flexible Network MODEL)

booking arrangements for FLEXIBLE LINE

3.26
check constraint
(Check Constraint MODEL)

characteristics of a process that takes place at a SITE COMPONENT, such as check-in, security screening, ticket control or immigration, that may potentially incur a time penalty that should be allowed for when journey planning

3.27
check constraint delay
(Check Constraint MODEL)

time penalty associated with a CHECK CONSTRAINT

3.28
check constraint throughput
(*Check Constraint MODEL*)

throughput of a CHECK CONSTRAINT: the number of passengers who can pass through it in a specified interval

3.29
class in frame
(*Generic Version MODEL*)

the different CLASSEes IN REPOSITORY which can be relevant for corresponding VERSION FRAMEs

3.30
class in repository
(*Generic Entity MODEL*)

any ENTITY name belonging to the repository. E.g. DAY TYPE, PROPERTY OF DAY, TIME BAND, VEHICLE TYPE, DUTY, etc. are relevant instances of CLASS IN REPOSITORY in the context of Version Management

3.31
class of use
(*Fare-Related Service Restriction MODEL*)

a classification of fare and other service classes by category of user entitled to use them

3.32
common section
(*Generic Point & Link MODEL*)

a part of a public transport network where the ROUTEs of several JOURNEY PATTERNs are going in parallel and where the synchronisation of SERVICE JOURNEYS may be planned and controlled with respect to commonly used LINKs and STOP POINTs. COMMON SECTIONs are defined arbitrarily and need not cover the total lengths of topologically bundled sections

3.33
communication service
(*Local Commercial Service MODEL*)

specialisation of LOCAL SERVICE dedicated to communication services

3.34
complaints service
(*Local Service Equipment MODEL*)

specialisation of CUSTOMER SERVICE for COMPLAINTs

3.35
complex feature
(*Generic Zone and Feature MODEL*)

an aggregate of SIMPLE FEATUREs and/or other COMPLEX FEATUREs; e.g. a STOP AREA: combination of STOP POINTs; a train station: combination of SIMPLE FEATUREs (POINTs, LINKs) and COMPLEX FEATUREs (STOP AREAs)

3.36
complex feature projection
(*Generic Projection MODEL*)

an oriented correspondence: from one COMPLEX FEATURE in the source layer, onto an entity in a target layer: e.g. POINT, COMPLEX FEATURE, within a defined TYPE OF PROJECTION

3.37
compound block
(*Vehicle Service MODEL*)

the work of a vehicle during the time it is coupled to another vehicle

3.38
compound train
(*Train MODEL*)

a VEHICLE TYPE composed of a sequence of more than one vehicles of the type TRAIN

3.39
connection
(*Service Pattern MODEL*)

the physical (spatial) possibility for a passenger to change from one public transport vehicle to another to continue the trip, determined by two SCHEDULED STOP POINTs. Different times may be necessary to cover the link between these points, depending on the kind of passenger

3.40
connection end
(*Service Pattern MODEL*)

one end of a CONNECTION

3.41
contact details
(*Generic Organisation MODEL*)

contact details for ORGANISATION for public use

3.42
control centre
(*Transport Organisations MODEL*)

an ORGANISATION PART for an operational team who are responsible for issuing commands to control the services

3.43
country
(*Topographic MODEL*)

a jurisdictional geographic boundary. A COUNTRY normally has a two character IANA identifier

3.44

coupled journey

(Coupled Journey MODEL)

a complete journey operated by a coupled train, composed of two or more VEHICLE JOURNEYS remaining coupled together all along a JOURNEY PATTERN. A COUPLED JOURNEY may be viewed as a single VEHICLE JOURNEY

3.45

course of journeys

(Vehicle Service MODEL)

a part of a BLOCK composed of consecutive VEHICLE JOURNEYS defined for the same DAY TYPE, all operated on the same LINE

3.46

crew base

(Vehicle & Crew Point MODEL)

a place where operating EMPLOYEES (e.g. drivers) report on and register their work

3.47

crossing equipment

(Access Equipment)

specialisation of PLACE ACCESS EQUIPMENT for CROSSING EQUIPMENTS (zebra, pedestrian lights, acoustic device sensors, tactile guide strips, etc.)

3.48

customer service

(Local Service Equipment MODEL)

generic specialisation of LOCAL SERVICE for CUSTOMER SERVICES (lost properties, meeting point, complaints, etc.)

3.49

cycle parking equipment

(Parking Equipment MODEL)

a specialisation of PLACE EQUIPMENT describing CYCLE PARKING EQUIPMENT

3.50

data source

(Generic Responsibility MODEL)

the DATA SOURCE identifies the system which has produced the data. References to a data source are useful in an interoperated computer system

3.51

dated passing time

(Passing Times MODEL)

a PASSING TIME on a particular OPERATING DAY

3.52

dated vehicle journey
(*Dated Journey MODEL*)

a particular journey of a vehicle on a particular OPERATING DAY including all modifications possibly decided by the control staff

3.53

day of week
(*Service Calendar MODEL*)

a particular week day (from Monday to Sunday)

3.54

day type
(*Service Calendar MODEL*)

a type of day characterised by one or more properties which affect public transport operation. For example: weekday in school holidays

3.55

day type assignment
(*Service Calendar MODEL*)

the assignment of operational characteristics, expressed by DAY TYPEs, to particular OPERATING DAYS within a SERVICE CALENDAR

3.56

dead run
(*Vehicle Journey MODEL*)

a non-service VEHICLE JOURNEY

3.57

dead run pattern
(*Journey Pattern MODEL*)

a JOURNEY PATTERN to be used for DEAD RUNs

3.58

default connection
(*Service Connection MODEL*)

the physical (spatial) possibility for a passenger to change from one public transport vehicle to another to continue the trip.

It specifies default times to be used to change from one mode of transport to another at an area or national level as specified by a TOPOGRAPHIC PLACE, STOP AREA or SITE ELEMENT. It may be restricted to a specific MODE or OPERATOR or only apply in a particular direction of transfer, e.g. bus to rail may have a different time for rail to bus

3.59

default connection end
(*Service Connection MODEL*)

one end of a DEFAULT CONNECTION

3.60

default dead run run time

(Time Demand Times MODEL)

the time taken to traverse a TIMING LINK during a DEAD RUN, for a specified TIME DEMAND TYPE. This time may be superseded by the JOURNEY PATTERN RUN TIME or VEHICLE JOURNEY RUN TIME if these exist

3.61

default interchange

(Interchange MODEL)

a quality parameter fixing the acceptable duration (standard and maximum) for an INTERCHANGE to be planned between two SCHEDULED STOP POINTs. This parameter will be used to control whether any two VEHICLE JOURNEYS serving those points may be in connection

3.62

default service journey run time

(Time Demand Times MODEL)

the default time taken by a vehicle to traverse a TIMING LINK during a SERVICE JOURNEY, for a specified TIME DEMAND TYPE. This time may be superseded by the JOURNEY PATTERN RUN TIME or VEHICLE JOURNEY RUN TIME if these exist

3.63

delivery variant

(Notice MODEL)

a variant text of a NOTICE for use in a specific media or delivery channel (voice, printed material, etc)

3.64

department

(Generic Organisation MODEL)

an ORGANIZATION PART specific to a purpose and/or organisational structure

3.65

destination display

(Route MODEL)

an advertised destination of a specific JOURNEY PATTERN, usually displayed on a headsign or at other on-board locations

3.66

destination display variant

(Route MODEL)

an advertised destination of a specific JOURNEY PATTERN, usually displayed on a headsign or at other on-board locations

3.67

direction

(Route MODEL)

a classification for the general orientation of ROUTEs

3.68
display assignment
(*Passenger Information Equipment MODEL*)

the assignment of one STOP POINT and one JOURNEY PATTERN to a PASSENGER INFORMATION EQUIPMENT specifying that information on the STOP POINT and the JOURNEY PATTERN will be provided (e.g. displayed, printed)

3.69
dynamic stop assignment
(*Stop Assignment MODEL*)

the dynamic association of a SCHEDULED STOP POINT (i.e. a STOP POINT of a SERVICE PATTERN or JOURNEY PATTERN) with the next available STOP PLACE, QUAY or BOARDING POSITION within a STOP PLACE

3.70
encumbrance need
(*Accessibility MODEL*)

a specific USER NEED, i.e. a requirement of a passenger travelling with luggage, animal or any other object requiring special arrangements to access public transport

3.71
entity
(*Generic Entity MODEL*)

any data instance to be managed in an operational Version Management System. When several data sources coexist (multimodality and/or interoperability), an ENTITY has to be related to a given DATA SOURCE in which it is defined

3.72
entity in version
(*Generic Version MODEL*)

the ENTITY associated to a given VERSION

3.73
entrance
(*Site MODEL*)

a physical entrance or exit to/from a SITE. May be a door, barrier, gate or other recognizable point of access

3.74
entrance equipment
(*Access Equipment*)

specialisation of PLACE ACCESS EQUIPMENT for ENTRANCES (door, barrier, revolving door, etc.)

3.75
equipment
(*Generic Equipment MODEL*)

an item of equipment installed either fixed (PLACE EQUIPMENT) or on-board vehicles (VEHICLE EQUIPMENT). A service (LOCAL SERVICE such as LEFT LUGGAGE, TICKETING SERVICE) is considered as immaterial equipment as well

3.76

equipment place

(Generic Equipment MODEL)

a SITE COMPONENT containing EQUIPMENT

3.77

equipment position

(Generic Equipment MODEL)

the precise position within an EQUIPMENT PLACE where particular equipment is placed

3.78

escalator equipment

(Stair Equipment)

specialisation of STAIR EQUIPMENT for ESCALATORS

3.79

facility

(Facility MODEL)

a named amenity available to the public at a SITE or on a SERVICE. A facility has no further properties other than a name. An EQUIPMENT or LOCAL SERVICE is used to describe the further properties provided as part of particular facility

3.80

facility requirement

(Vehicle Type MODEL)

a classification of public transport vehicles according to the facilities available on the vehicle

3.81

facility set

(Facility MODEL)

a set of FACILITIES that may be associated with an ENTITY and subject to a specific VALIDITY CONDITION

3.82

flexible area

(Flexible Stop Place MODEL)

specialisation of a FLEXIBLE QUAY (which is abstract) to identify what is the catchment area for a flexible service (so that a stop finder can find the nearest available types of transport). It is a named zone visited by a particular mode of transport. It is part of the SITE data set rather than the service data set, since it can be defined and exists independently of an actual service

3.83

flexible line

(Flexible Network MODEL)

specialisation of LINE for flexible service. As all the service on a LINE may not all be flexible, flexibility itself is described at JOURNEY PATTERN level (meaning that a separate JOURNEY PATTERN is needed for each type of flexibility available for the line).

Types of flexible services are:

- Virtual line service
- Flexible service with main route
- Corridor service
- Fixed stop area-wide flexible service
- Free area-wide flexible service
- Mixed types of flexible service
- Mixed type of flexible and regular services

3.84

flexible link properties

(Flexible Network MODEL)

set of properties describing the flexible characteristics of a LINK.

A composition is used with LINK in order to avoid multiple inheritance and a type explosion of link subtypes

3.85

flexible point properties

(Flexible Network MODEL)

set of characteristics describing the possible flexibility of POINTs. A composition is used with POINT in order to avoid multiple inheritance

3.86

flexible quay

(Flexible Stop Place MODEL)

a physical ZONE such as a section of a road where a flexible service is available on demand. The existence of the zone makes the services visible to journey planners looking for available services for an area

3.87

flexible route

(Flexible Network MODEL)

specialisation of ROUTE for flexible service. May include both point and zonal areas and ordered and unordered sections

3.88

flexible service properties

(Flexible Service MODEL)

additional characteristics of flexible service. A service may be partly fixed, partly flexible

3.89

flexible stop assignment

(Flexible Stop Place MODEL)

the allocation of a SCHEDULED STOP POINT (i.e. a STOP POINT of a SERVICE PATTERN or JOURNEY PATTERN) to a specific FLEXIBLE STOP PLACE, and also possibly a FLEXIBLE AREA or HAIL AND RIDE AREA. May be subject to a VALIDITY CONDITION

3.90

flexible stop place

(Flexible Stop Place MODEL)

a specialisation of the STOP PLACE describing a stop of a FLEXIBLE SERVICE. It may be composed of FLEXIBLE AREAs or HAIL AND RIDE AREAs identifying the catchment areas for flexible services (when they use areas or flexible quays). Some FLEXIBLE SERVICE also use regular STOP PLACES for their stops. When assigned to a SCHEDULED STOP POINT the corresponding SCHEDULED STOP POINT is supposed to be a ZONE (the centroid point of the ZONE being the SCHEDULED STOP POINT)

3.91

garage

(Vehicle & Crew Point MODEL)

a facility used for parking and maintaining vehicles. PARKING POINTs in a GARAGE are called GARAGE POINTs

3.92

garage point

(Vehicle & Crew Point MODEL)

a subtype of PARKING POINT located in a GARAGE

3.93

group of entities

(Generic Grouping MODEL)

a set of ENTITies grouped together according to a PURPOSE OF GROUPING, e.g. grouping of stops known to the public by a common name

3.94

group of lines

(Route MODEL)

a grouping of lines which will be commonly referenced for a specific purpose

3.95

group of link sequences

(Generic Point & Link Sequence MODEL)

a grouping of LINK SEQUENCEs

3.96

group of links

(Generic Point & Link MODEL)

a grouping of LINKs. E.g. one GROUP OF LINKs may be managed by a same AUTHORITY

3.97
group of operators
(*Transport Organisations MODEL*)

a group of OPERATORS having for instance common schemes for fare collection or passenger information

3.98
group of points
(*Generic Point & Link MODEL*)

a grouping of POINTs. The STOP AREA represents one of the most significant GROUPs OF POINTs

3.99
group of services
(*Service Journey MODEL*)

a group of SERVICES, often known to its users by a name or a number

3.100
group of timebands
(*Service Calendar MODEL*)

A grouping of TIME BANDs.

3.101
group of timing links
(*Time Demand Type MODEL*)

a set of TIMING LINKs grouped together according to the similarity of TIME BANDs which are relevant to them. There may be a GROUP OF TIMING LINKs which covers all TIMING LINKs, for use when different GROUPs OF TIMING LINKs are not needed

3.102
hail and ride area
(*Flexible Stop Place MODEL*)

specialisation of a FLEXIBLE QUAY to identify what is the catchment zone for a hail and ride service (so that a stop finder can find the nearest available types of transport). It is a named zone visited by a particular mode of transport and may be designated by a start point and end point on the road

Note 1 to entry: It is part of the Site data set rather than the service data set, since it can be defined and exists independently of an actual service.

3.103
heading sign
(*Sign Equipment*)

specialisation of SIGN EQUIPMENT for headings providing information like direction name, line name, etc

3.104
headway interval
(*Vehicle Journey Times MODEL*)

a time interval or a duration defining a headway period and characterizing HEADWAY JOURNEY GROUP (e.g. every 10 min, every 4-6 min)

3.105

headway journey group

(Vehicle Journey Times MODEL)

a group of VEHICLE JOURNEYS following the same JOURNEY PATTERN having the same HEADWAY INTERVAL between a specified start and end time (for example, every 10 min). This is especially useful for passenger information

3.106

hire service

(Local Commercial Service MODEL)

specialisation of LOCAL SERVICE dedicated to hire services (e.g. cycle hire, car hire)

3.107

infrastructure link

(Infrastructure Network MODEL)

a super-type including all LINKs of the physical network (e.g. RAILWAY ELEMENT)

3.108

infrastructure point

(Infrastructure Network MODEL)

a super-type including all POINTs of the physical network (e.g. RAILWAY JUNCTION)

3.109

installed equipment

(Generic Equipment MODEL)

an item of equipment either fixed (PLACE EQUIPMENT) or on board i.e. associated with vehicles. This equipment is materialised as opposed to a service (LOCAL SERVICE) considered as an immaterial equipment

3.110

interchange

(Interchange MODEL)

the scheduled possibility for transfer of passengers between two SERVICE JOURNEYS at the same or different STOP POINTs

3.111

interchange rule

(Interchange Rule MODEL)

conditions for considering JOURNEYS to meet or not to meet, specified indirectly: by a particular MODE, DIRECTION or LINE. Such conditions may alternatively be specified directly, indicating the corresponding services. In this case they are either a SERVICE JOURNEY PATTERN INTERCHANGE or a SERVICE JOURNEY INTERCHANGE

3.112

interchange rule parameter

(Interchange Rule MODEL)

assignment of parameters characterising an INTERCHANGE RULE

3.113

interchange rule timing (*Interchange Rule MODEL*)

timings for an INTERCHANGE RULE for a given TIME DEMAND TYPE or TIME BAND

3.114

journey (*Vehicle Journey MODEL*)

common properties of VEHICLE JOURNEYS and SPECIAL SERVICES, e.g. their link to accounting characteristics

3.115

journey accounting (*Journey Accounting MODEL*)

parameters characterizing VEHICLE JOURNEYS or SPECIAL SERVICES used for accounting purposes in particular in contracts between ORGANISATIONS

3.116

journey frequency group (*Vehicle Journey Times MODEL*)

a group of JOURNEYS defined in order to describe special behaviour like frequency based services or rhythmical services (runs all xxh10, xxh25 and xxh45... for example; this is especially useful for passenger information)

3.117

journey headway (*Journey Timing MODEL*)

headway interval information that is available for all the VEHICLE JOURNEYS running on the JOURNEY PATTERN for a given TIME DEMAND TYPE, at a given TIMING POINT. This is a default value that can be superseded by VEHICLE JOURNEY HEADWAY. This information shall be consistent with HEADWAY JOURNEY GROUP if available (HEADWAY JOURNEY GROUP being a more detailed way of describing headway services)

3.118

journey layover (*Journey Timing MODEL*)

time allowance at the end of each journey on a specified JOURNEY PATTERN, to allow for delays and for other purposes. This layover supersedes any global layover and may be superseded by a specific VEHICLE JOURNEY LAYOVER

3.119

journey meeting (*Interchange MODEL*)

a time constraint for one or several SERVICE JOURNEYS fixing interchanges between them and/or an external event (e.g. arrival or departure of a feeder line, opening time of the theatre, etc.)

3.120

journey part (*Coupled Journey MODEL*)

a part of a VEHICLE JOURNEY created according to a specific functional purpose, for instance in situations when vehicle coupling or separating occurs

3.121

journey part couple

(Coupled Journey MODEL)

two JOURNEY PARTs of different VEHICLE JOURNEYS served simultaneously by a train set up by coupling their single vehicles

3.122

journey pattern

(Journey Pattern MODEL)

an ordered list of SCHEDULED STOP POINTs and TIMING POINTs on a single ROUTE, describing the pattern of working for public transport vehicles. A JOURNEY PATTERN may pass through the same POINT more than once. The first point of a JOURNEY PATTERN is the origin. The last point is the destination

3.123

journey pattern headway

(Journey Pattern Times MODEL)

headway interval information that is available for all the VEHICLE JOURNEYS running on the JOURNEY PATTERN. This is a default value that can be superseded by the VEHICLE JOURNEY HEADWAY on a specific journey. This information shall be consistent with HEADWAY JOURNEY GROUP if available (HEADWAY JOURNEY GROUP being a more detailed way of describing headway services)

3.124

journey pattern layover

(Journey Pattern Times MODEL)

time allowance at the end of each journey on a specified JOURNEY PATTERN, to allow for delays and for other purposes. This layover supersedes any global layover and may be superseded by a specific VEHICLE JOURNEY LAYOVER

3.125

journey pattern run time

(Journey Pattern Times MODEL)

the time taken to traverse a TIMING LINK in a particular JOURNEY PATTERN, for a specified TIME DEMAND TYPE. If it exists, it will override the DEFAULT SERVICE JOURNEY RUN TIME and DEFAULT DEAD RUN TIME

3.126

journey pattern wait time

(Journey Pattern Times MODEL)

the time a vehicle has to wait at a specific TIMING POINT IN JOURNEY PATTERN, for a specified TIME DEMAND TYPE. This wait time can be superseded by a VEHICLE JOURNEY WAIT TIME

3.127

journey run time

(Journey Timing MODEL)

the time taken to traverse a TIMING LINK in a particular JOURNEY PATTERN, for a specified TIME DEMAND TYPE. If it exists, it will override the DEFAULT SERVICE JOURNEY RUN TIME and DEFAULT DEAD RUN TIME

3.128

journey timing

(Journey Timing MODEL)

a time-related information referring to journey timing whose value depends on the time of use and so can be associated with a TIME DEMAND TYPE, TIME BAND or OPERATIONAL CONTEXT

3.129

journey wait time

(Journey Timing MODEL)

the time a vehicle has to wait at a specific TIMING POINT IN JOURNEY PATTERN, for a specified TIME DEMAND TYPE. This wait time can be superseded by a VEHICLE JOURNEY WAIT TIME

3.130

left luggage service

(Local Service Equipment MODEL)

specialisation of CUSTOMER SERVICE for left luggage (provides left luggage information like self-service locker, locker free, etc.)

3.131

level

(Site MODEL)

an identified storey (ground, first, basement, mezzanine, etc) within an interchange building or SITE on which SITE COMPONENTs reside. A PATH LINK may connect components on different levels

3.132

lift equipment

(Stair Equipment)

specialisation of PLACE ACCESS EQUIPMENT for LIFTS (provides lift characteristics like depth, maximum load, etc.)

3.133

line

(Route MODEL)

a group of ROUTEs which is generally known to the public by a similar name or number

3.134

line network

(Line Network MODEL)

the topological structure of a NETWORK as a graph of LINE SECTIONS. This allows the branches and loops of a LINE to be described as a whole

3.135

line section

(Line Network MODEL)

a part of a NETWORK comprising an edge between two nodes. Not directional

3.136

line shape

(Generic Projection MODEL)

the graphical shape of a LINK obtained from a formula or other means, using the LOCATION of its limiting POINTs and depending on the LOCATING SYSTEM used for the graphical representation

3.137

link

(Generic Point & Link MODEL)

an oriented spatial object of dimension 1 with view to the overall description of a network, describing a connection between two POINTs

3.138

link in link sequence

(Generic Point & Link Sequence MODEL)

the order of a LINK in a LINK SEQUENCE to which it belongs

3.139

link projection

(Generic Projection MODEL)

an oriented correspondence from one LINK of a source layer, onto an entity in a target layer: e.g. LINK SEQUENCE, COMPLEX FEATURE, within a defined TYPE OF PROJECTION

3.140

link sequence

(Generic Point & Link Sequence MODEL)

an ordered sequence either of POINTs or of LINKs, defining a path through the network

3.141

local service

(Generic Equipment MODEL)

a named service relating to the use of the SITE or transport services at a particular location, for example portage, assistance for disabled users, booking offices etc. The service may have a VALIDITY CONDITION associated with it. A LOCAL SERVICE is treated as a form of non-material EQUIPMENT

3.142

locating system

(Location MODEL)

the system used as reference for location and graphical representation of the network and other spatial objects

3.143

location

(Location MODEL)

the position of a POINT with a reference to a given LOCATING SYSTEM (e. g. coordinates)

3.144

logical display

(Passenger Information Equipment MODEL)

a set of data that can be assembled for assignment to a physical PASSENGER INFORMATION EQUIPMENT or to a logical channel such as web or media. It is independent of any physical embodiment.

A LOGICAL DISPLAY may have a set of DISPLAY ASSIGNMENTS each of which associates a JOURNEY PATTERN whose journeys are to be shown at the LOGICAL DISPLAY. It may also be associated with a SCHEDULED STOP POINT. A LOGICAL DISPLAY corresponds to a SIRI STOP MONITORING point

3.145

lost property service

(Local Service Equipment MODEL)

specialisation of CUSTOMER SERVICE for lost properties

3.146

luggage service

(Local Service Equipment MODEL)

specialisation of CUSTOMER SERVICE for luggage services (provides luggage service facilities and characteristics like luggage trolley, free to use, etc.)

3.147

luggage locker equipment

(Site Equipment MODEL)

specialisation of STOP PLACE EQUIPMENT for luggage lockers

3.148

management agent

(Additional Organisation MODEL)

specialisation of ORGANISATION for MANAGEMENT AGENTS

3.149

manoeuvre

(Network Restriction MODEL)

a specification of impossible move for a certain type of vehicle. It specifies from which INFRASTRUCTURE LINK to which other (adjacent) INFRASTRUCTURE LINK a certain VEHICLE TYPE cannot proceed, due to physical restrictions

3.150

manoeuvring requirement

(Vehicle Type MODEL)

a classification of requirements for a public transport VEHICLE according to the Manoeuvring capabilities of the vehicle

3.151

medical need

(Accessibility MODEL)

a specific USER NEED, i.e. a requirement of a passenger as regards medical constraint (e.g. allergy) to access public transport

3.152

meeting point service

(Local Service Equipment MODEL)

specialisation of CUSTOMER SERVICE for meeting points (provides characteristics like description, label, etc.)

3.153

meeting restriction

(Network Restriction MODEL)

a pair of INFRASTRUCTURE LINKs where vehicles of specified VEHICLE TYPEs are not allowed to meet

3.154

mobility need

(Accessibility MODEL)

a specific USER NEED, i.e. a constraint of a passenger as regards his mobility, e.g. wheelchair, assisted wheelchair, etc

3.155

mode

(Reusable Transport Mode MODEL)

any means of transport

3.156

money service

(Local Commercial Service MODEL)

specialisation of LOCAL SERVICE dedicated to money services

3.157

navigation path

(Path & Navigation Path MODEL)

a designated path between two places. May include an ordered sequence of PATH LINKs

3.158

navigation path assignment

(Path Assignment MODEL)

the allocation of a NAVIGATION PATH to a specific STOP POINT ASSIGNMENT, for example to indicate the path to be taken to make a CONNECTION

3.159

network

(Route MODEL)

a named grouping of LINEs under which a transport network is known.

3.160

normal dated block

(Vehicle Service MODEL)

a DATED BLOCK identical to a long-term planned BLOCK, possibly updated according to short-term modifications of the PRODUCTION PLAN decided by the control staff

3.161
normal dated vehicle journey
(*Dated Journey MODEL*)

a DATED VEHICLE JOURNEY identical to a long-term planned VEHICLE JOURNEY, possibly updated according to short-term modifications of the PRODUCTION PLAN decided by the control staff

3.162
notice
(*Notice MODEL*)

a text for informational purposes on exceptions in a LINE, a JOURNEY PATTERN, etc. The information may be usable for passenger or driver information

3.163
notice assignment
(*Notice Assignment MODEL*)

the assignment of a NOTICE showing an exception in a JOURNEY PATTERN, a COMMON SECTION, or a VEHICLE JOURNEY, possibly specifying at which POINT IN JOURNEY PATTERN the validity of the NOTICE starts and ends respectively

3.164
onboard stay
(*Facility MODEL*)

permission to board early before the journey or stay on board after the journey

3.165
operating day
(*Service Calendar MODEL*)

a day of public transport operation of which the characteristics are defined within in a specific SERVICE CALENDAR. An OPERATING DAY may last more than 24 hours

3.166
operating department
(*Transport Organisations MODEL*)

a specific DEPARTMENT which administers certain LINES

3.167
operating period
(*Service Calendar MODEL*)

a continuous interval of time between two OPERATING DAYs which will be used to define validities

3.168
operational context
(*Transport Organisations MODEL*)

characterization of a set of operational objects, such as timing or links determined either by a DEPARTMENT or by an ORGANISATIONAL UNIT

3.169
operator
(*Transport Organisations MODEL*)

a company providing public transport services

3.170
organisation
(*Generic Organisation MODEL*)

a legally incorporated body associated with any aspect of the transport system

3.171
organisation day type
(*Additional Organisation MODEL*)

DAY TYPE that is defined in terms of operation or not operation of a referenced SERVICED ORGANISATION

3.172
organisation part
(*Generic Organisation MODEL*)

a part of an ORGANISATION to which specific responsibilities upon the data and data management may be assigned

3.173
organisational unit
(*Generic Organisation MODEL*)

an ORGANISATION PART to which a set of responsibilities in a public transport company for planning and control is assigned

3.174
other organisation
(*Additional Organisation MODEL*)

generic ORGANISATION being neither an AUTHORITY, neither a public transport OPERATOR (TRAVEL AGENT, MANAGEMENT AGENT, etc.)

3.175
other sign
(*Sign Equipment*)

specialisation of SIGN EQUIPMENT which are not HEADING SIGNS neither PLACE SIGNS

3.176
overtaking possibility
(*Network Restriction MODEL*)

NETWORK RESTRICTION specifying a POINT or a LINK where vehicles of specified VEHICLE TYPEs are or are not allowed to overtake each other

3.177
parking
(*Parking MODEL*)

designated locations for leaving vehicles such as cars, motorcycles and bicycles

3.178
parking entrance for vehicles
(*Parking MODEL*)

an entrance for vehicles to the PARKING from the road

3.179
parking area
(*Parking MODEL*)

a marked zone within a PARKING containing PARKING BAYs

3.180
parking bay
(*Parking MODEL*)

a place to park an individual vehicle

3.181
parking capacity
(*Parking MODEL*)

PARKING properties providing information about its CAPACITY

3.182
parking component
(*Parking MODEL*)

generic COMPONENT of a PARKING (e.g. PARKING AREA or PARKING BAY)

3.183
parking passenger entrance
(*Parking MODEL*)

an entrance to the PARKING for passengers on foot or other out-of-vehicle mode, such as wheelchair

3.184
parking point
(*Vehicle & Crew Point MODEL*)

A TIMING POINT where vehicles may stay unattended for a long time. A vehicle's return to park at a PARKING POINT marks the end of a BLOCK

3.185
parking properties
(*Parking MODEL*)

PARKING specific properties other than its CAPACITY

3.186
passenger accessibility need
(*Accessibility MODEL*)

a passenger's requirement for accessibility, comprising one or more USER NEEDs. For example, that he is unable to navigate stairs, or lifts, or has visual or auditory impairments. PASSENGER ACCESSIBILITY NEEDs can be used to derive an accessibility constraint for the passenger, allowing the computation of paths for passengers with specifically constrained mobility. Example: Wheelchair, No Lifts, No Stairs

3.187

passenger carrying requirement
(Vehicle Type MODEL)

a classification of requirements for a public transport vehicle according to the passenger carrying capabilities of the vehicle

3.188

passenger equipment
(Generic Equipment MODEL)

an item of equipment of a particular type actually available at a location within a PLACE or a VEHICLE

3.189

passenger information equipment
(Passenger Information Equipment MODEL)

a public transport information piece of equipment, as for instance terminals (on street, at information desks, telematic, ...) or printed material (leaflets displayed at stops, booklets, ...)

3.190

passenger safety equipment
(Passenger Service Equipment MODEL)

specialisation of PASSENGER EQUIPMENT for passenger safety

3.191

passenger stop assignment
(Stop Assignment MODEL)

the allocation of a SCHEDULED STOP POINT (i.e. a STOP POINT of a SERVICE PATTERN or JOURNEY PATTERN) to a specific STOP PLACE for a PASSENGER SERVICE, and also possibly a QUAY and BOARDING POSITION

3.192

passing time
(Passing Times MODEL)

time data concerning public transport vehicles passing a particular POINT; e.g. arrival time, departure time, waiting time

3.193

path junction
(Path & Navigation Path MODEL)

a designated point, inside or outside of a STOP PLACE or POINT OF INTEREST, at which two or more PATH LINKs may connect or branch

3.194

path link
(Path & Navigation Path MODEL)

a link within a PLACE or between two PLACEs (that is STOP PLACEs, ACCESS SPACEs or QUAYs, BOARDING POSITIONs, POINTs OF INTEREST etc. or PATH JUNCTIONs) that represents a step in a possible route for pedestrians, cyclists or other out-of-vehicle passengers within or between a PLACE

Note 1 to entry: It is possible but not mandatory that a PATH LINK projects onto a more detailed set of infrastructure or mapping links that plot the spatial course, allowing it to be represented on maps and to tracking systems.

3.195

path link end

(Path & Navigation Path MODEL)

beginning or end SITE for a PATH LINK. May be linked to a specific LEVEL of the SITE

3.196

path link in sequence

(Path & Navigation Path MODEL)

a step of a NAVIGATION PATH indicating traversal of a particular PATH LINK as part of a recommended route

Note 1 to entry: The same PATH LINK may occur in different sequences in different NAVIGATION PATHs.

3.197

place

(Generic Place MODEL)

a geographic place of any type which may be specified as the origin or destination of a trip. A PLACE may be of dimension 0 (a POINT), 1 (a road section) or 2 (a ZONE)

3.198

place access equipment

(Access Equipment)

specialisation of PLACE EQUIPMENT dedicated to access (e.g. lifts, entrances, stairs, ramps, etc.)

3.199

place equipment

(Generic Equipment MODEL)

an item of equipment of a particular type actually available at a location within a PLACE

3.200

place lighting

(Access Equipment)

specialisation of PLACE EQUIPMENT for LIGHTING EQUIPMENT (e.g. lamp post)

3.201

place sign

(Sign Equipment)

sign with the name of a STOP PLACE on it

3.202

point

(Generic Point & Link MODEL)

a 0-dimensional node of the network used for the spatial description of the network. POINTs may be located by a LOCATION in a given LOCATING SYSTEM

3.203

point in journey pattern

(Journey Pattern MODEL)

a STOP POINT or TIMING POINT in a JOURNEY PATTERN with its order in that JOURNEY PATTERN

3.204

point in link sequence

(Generic Point & Link Sequence MODEL)

a POINT in a LINK SEQUENCE indicating its order in that particular LINK SEQUENCE

3.205

point of interest

(Point Of Interest MODEL)

a type of PLACE to or through which passengers may wish to navigate as part of their journey and which is modelled in detail by journey planners

3.206

point of interest classification

(Point Of Interest MODEL)

a classification of a POINT OF INTEREST that may be used in a CLASSIFICATION HIERARCHY to categorise the point by nature of interest using a systematic taxonomy, for example Museum, Football, Stadium

3.207

point of interest classification hierarchy

(Point Of Interest MODEL)

a logical hierarchy for organizing POINT OF INTEREST CLASSIFICATIONS. A POINT OF INTEREST CLASSIFICATION can belong to more than one hierarchy

3.208

point of interest classification membership

(Point Of Interest MODEL)

the POINT OF INTEREST CLASSIFICATION and POINT OF INTEREST CLASSIFICATION MEMBERSHIP are used to encode a hierarchy of classifications to index and find different types of POINT OF INTEREST. For example, Educational Building -> School -> Primary School, or Cultural Attraction -> Museum -> Art Museum

Note 1 to entry: POINT OF INTEREST CLASSIFICATION MEMBERSHIP does not have to be disjoint, i.e. the same category may appear in more than one CLASSIFICATION.

3.209

point of interest component

(Point Of Interest MODEL)

specialisation of SITE COMPONENT for COMPONENT of POINT OF INTEREST. Usually used for POINT OF INTEREST SPACES

3.210

point of interest entrance

(Point Of Interest MODEL)

specialisation of ENTRANCE to enter/exit a POINT OF INTEREST

3.211

point of interest space

(Point Of Interest MODEL)

specialisation of POINT OF INTEREST COMPONENT for SPACES. A physical area within the POINT OF INTEREST, such as a concourse

3.212

point of interest vehicle entrance

(Point Of Interest MODEL)

a physical entrance or exit to/from a POINT OF INTEREST for vehicles

3.213

point on link

(Generic Point & Link MODEL)

a POINT on a LINK which is not needed for LINK definition, but may be used for other purposes, e.g. for purposes of AVM or PI, or for driver information

3.214

point on route

(Route MODEL)

a ROUTE POINT used to define a ROUTE with its order on that ROUTE

3.215

point projection

(Generic Projection MODEL)

an oriented correspondence from one POINT of a source layer, onto an entity in a target layer: e.g. POINT, LINK, LINK SEQUENCE, COMPLEX FEATURE, within a defined TYPE OF PROJECTION

3.216

postal address

(Topographic MODEL)

a specification of ADDRESS refining it by using the attributes used for conventional identification for mail. Comprises variously a building Identifier, Street name, Post code and other descriptors

3.217

property of day

(Service Calendar MODEL)

a property which a day may possess, such as school holiday, weekday, summer, winter etc.

3.218

psychosensory need

(Accessibility MODEL)

a specific USER NEED, i.e. a constraint of a passenger as regards his psycho-sensory impairments, such as visual impairment, auditory impairment, averse to confined spaces, etc.

3.219

purpose of equipment profile (Vehicle Type MODEL)

a functional purpose which requires a certain set of equipment of different types put together in a VEHICLE EQUIPMENT PROFILE or STOP POINT EQUIPMENT PROFILE

3.220

purpose of grouping (Generic Grouping MODEL)

functional purpose for which GROUPs of elements are defined. The PURPOSE OF GROUPING may be restricted to one or more types of the given object

3.221

purpose of journey partition (Coupled Journey MODEL)

an operational purpose changing within a JOURNEY PATTERN and with this subdividing the SERVICE JOURNEY into JOURNEY PARTs

3.222

quay (Stop Place MODEL)

a place such as platform, stance, or quayside where passengers have access to PT vehicles, Taxi, cars or other means of transportation. A QUAY may serve one or more VEHICLE STOPPING PLACES and be associated with one or more STOP POINTS.

A QUAY may contain other sub QUAYs. A child QUAY shall be physically contained within its parent QUAY

3.223

queuing equipment (Access Equipment)

specialisation of PLACE ACCESS EQUIPMENT dedicated to queuing

3.224

railway element (Infrastructure Network MODEL)

a type of INFRASTRUCTURE LINK used to describe a railway network

3.225

railway junction (Infrastructure Network MODEL)

a type of INFRASTRUCTURE POINT used to describe a railway network

3.226

ramp equipment (Access Equipment)

specialisation of PLACE ACCESS EQUIPMENT for ramps (provides ramp characteristics like length, gradient, etc.)

3.227

refreshments service

(Local Commercial Service MODEL)

specialisation of LOCAL SERVICE dedicated to refreshments service

3.228

relief opportunity

(Vehicle Service MODEL)

a time in a BLOCK where a vehicle passes a RELIEF POINT. This opportunity may or may not be actually used for a relief

3.229

relief point

(Vehicle & Crew Point MODEL)

a TIMING POINT where a relief is possible, i.e. a driver may take on or hand over a vehicle. The vehicle may sometimes be left unattended

3.230

responsibility role

(Responsibility Role MODEL)

a particular role an ORGANISATION or an ORGANISATION PART is playing as regards certain data, for example data origination, data augmentation, data aggregation, data distribution, planning, operation, control, ownership etc)

3.231

responsibility role assignment

(Responsibility Role MODEL)

the assignment of one or more roles to an ORGANISATION or an ORGANISATION PART as regards the responsibility it will have as regards specific data (e.g. ownership, planning, etc.) and the management of this data (e.g. distribution, updates, etc.)

3.232

responsibility set

(Responsibility Role MODEL)

a list of possible responsibilities over one or more ENTITIES IN VERSION., resulting from the process of the assignment of RESPONSIBILITY ROLES (such as data origination, ownership, etc) on specific data (instances) to ORGANISATIONS or ORGANISATION PARTS

3.233

retail service

(Local Commercial Service MODEL)

specialisation of LOCAL SERVICE dedicated to retail services

3.234

rhythmical journey group

(Vehicle Journey Times MODEL)

a group of VEHICLE JOURNEYS following the same JOURNEY PATTERN having the same rhythm" every hour (for example runs at xxh10, xxh25 and xxh45...) between a specified start and end time"

3.235

road address

(Topographic MODEL)

specialization of ADDRESS refining it by using the characteristics such as road number, and name used for conventional identification of along a road

3.236

road element

(Infrastructure Network MODEL)

a type of INFRASTRUCTURE LINK used to describe a road network

3.237

road junction

(Infrastructure Network MODEL)

a type of INFRASTRUCTURE POINT used to describe a road network

3.238

rough surface

(Access Equipment)

specialisation of PLACE EQUIPMENT for rough surfaces, giving properties of surface texture, mainly for impaired person information

3.239

route

(Route MODEL)

an ordered list of located POINTs defining one single path through the road (or rail) network. A ROUTE may pass through the same POINT more than once

3.240

route link

(Route MODEL)

an oriented link between two ROUTE POINTs allowing the definition of a unique path through the network

3.241

route point

(Route MODEL)

a POINT used to define the shape of a ROUTE through the network

3.242

routing constraint zone

(Routing Constraint MODEL)

a ZONE defining a ROUTING CONSTRAINT. The ZONE may be defined by its contained SCHEDULED STOP POINTS or by its boundary points

EXAMPLE If you board in this ZONE, you can't alight in the same ZONE".

3.243

rubbish disposal

(Passenger Service Equipment MODEL)

specialization of EQUIPMENT for Rubbish disposal, describing rubbish types, etc.

3.244

sanitary equipment

(Passenger Service Equipment MODEL)

specialisation of PASSENGER EQUIPMENT for sanitary facilities

3.245

scheduled stop point

(Service Pattern MODEL)

a POINT where passengers can board or alight from vehicles

3.246

schematic map

(Schematic Map MODEL)

a map representing schematically the layout of the topographic structure of the public transport network (a set of LINES) and a set of SITES. It can include a pixel projection of a set of ENTITIES onto a bitmap image so as to support hyperlinked interactions

3.247

seating equipment

(Site Equipment MODEL)

specialisation of PLACE EQUIPMENT describing the properties of seating

3.248

service calendar

(Service Calendar MODEL)

a collection of DAY TYPE ASSIGNMENTS

3.249

service exclusion

(Routing Constraint MODEL)

a constraint expressing the fact that the service, on a specific JOURNEY PATTERN (usually a FTS JOURNEY PATTERN) cannot operate when another (regular) service operates. This may occur only on a subpart of the JOURNEY PATTERN, or only on one or some specific SCHEDULED STOP POINTS

3.250

service facility set

(Facility MODEL)

set of FACILITIES available for a SERVICE JOURNEY or a JOURNEY PART. The set may be available only for a specific VEHICLE TYPE within the SERVICE (e.g. carriage equipped with low floor)

3.251

service journey

(Service Journey MODEL)

a passenger carrying VEHICLE JOURNEY for one specified DAY TYPE. The pattern of working is in principle defined by a SERVICE JOURNEY PATTERN

3.252

service journey interchange

(Interchange MODEL)

the scheduled possibility for transfer of passengers between two SERVICE JOURNEYS at the same or different STOP POINTS

3.253

service journey pattern

(Service Pattern MODEL)

the JOURNEY PATTERN for a (passenger carrying) SERVICE JOURNEY

3.254

service journey pattern interchange

(Interchange MODEL)

a recognised/organised possibility for passengers to change public transport vehicles using two STOP POINTS (which may be identical) on two particular SERVICE JOURNEY PATTERNS, including the maximum wait duration allowed and the standard to be aimed at. These may supersede the times given for the DEFAULT INTERCHANGE. Schedulers may use this entity for synchronisation of journeys

3.255

service link

(Service Pattern MODEL)

a LINK between an ordered pair of SCHEDULED STOP POINTS

3.256

service pattern

(Service Pattern MODEL)

the subset of a JOURNEY PATTERN made up only of STOP POINTS IN JOURNEY PATTERN

3.257

service restriction

(Fare-Related Service Restriction MODEL)

parameters describing the limitations as regards the use of equipment or service

3.258

service site

(Site MODEL)

a sub-type of SITE which is of specific interest for the operator (e.g. where a joint service or a joint fee is proposed), other than a STOP PLACE

3.259

serviced organisation

(Additional Organisation MODEL)

a public or private organisation for which public transport services are provided on specific days, e.g. a school, university or works

3.260

shelter equipment

(Site Equipment MODEL)

specialisation of WAITING EQUIPMENT for a shelter

3.261

sign equipment

(Sign Equipment)

specialisation of PLACE EQUIPMENT for signs (heading signs, etc.)

3.262

simple feature

(Generic Zone and Feature MODEL)

an abstract representation of elementary objects related to the spatial representation of the network. POINTs (0-dimensional objects), LINKs (1-dimensional objects) and ZONEs (2-dimensional objects) may be viewed as SIMPLE FEATUREs

3.263

site

(Site MODEL)

a type of PLACE, such as a STOP PLACE, POINT OF INTEREST or ADDRESS, to which passengers may wish to travel. A SITE can have designated ENTRANCEs that represent the available points of access for different USER NEEDs

3.264

site component

(Site MODEL)

an element of a SITE describing a part of its structure. SITE COMPONENTs share common properties for data management, accessibility and other features

3.265

site connection

(Service Connection MODEL)

the physical (spatial) possibility for a passenger to change from one public transport vehicle to another to continue the trip, determined by physical locations, such as SITEs and/or its components and/or ENTRANCEs, in particular STOP PLACEs and/or its components. Different times may be necessary to cover the resulting distance, depending on the kind of passenger

3.266

site connection end

(Service Connection MODEL)

one end of a SITE CONNECTION

3.267

site element

(Site MODEL)

a type of PLACE specifying common properties of a SITE or a SITE COMPONENT to describe it., including accessibility

3.268

site equipment

(Site Equipment MODEL)

specialisation of PLACE EQUIPMENT for SITES (e.g. LUGGAGE LOCKER, WAITING EQUIPMENT, TROLLEY STAND, etc.)

3.269

site facility set

(Facility MODEL)

set of FACILITIES available for a SITE or SITE ELEMENT

3.270

site point in sequence

(Path & Navigation Path MODEL)

POINT building up a NAVIGATION PATH within an ordered set of other SITE POINTs IN SEQUENCE. May also be the beginning or end of a PATH LINK IN SEQUENCE

3.271

special service

(Service Journey MODEL)

a work of a vehicle that is not planned in a classical way, i.e. that is generally not based on VEHICLE JOURNEYS using JOURNEY PATTERNS. It involves specific characteristics (such as specific access rights) and/or may be operated under specific circumstances

3.272

stair equipment

(Stair Equipment)

specialisation of PLACE ACCESS EQUIPMENT for stairs (stair, escalator, staircase, etc.)

3.273

staircase equipment

(Stair Equipment)

specialisation of STAIR EQUIPMENT for stair cases

3.274

stop area

(Service Pattern MODEL)

a group of SCHEDULED STOP POINTs close to each other

3.275

stop assignment

(Stop Assignment MODEL)

the allocation of a SCHEDULED STOP POINT (i.e. a SCHEDULED STOP POINT of a SERVICE PATTERN or JOURNEY PATTERN) to a specific STOP PLACE, for either a Passenger JOURNEY or VEHICLE SERVICE

3.276

stop place

(Stop Place MODEL)

a place comprising one or more locations where vehicles may stop and where passengers may board or leave vehicles or prepare their trip. A STOP PLACE will usually have one or more well-known names

3.277

stop place component

(Stop Place MODEL)

an element of a STOP PLACE describing part of its structure. STOP PLACE COMPONENTs share common properties for data management, accessibility and other features

3.278

stop place entrance

(Stop Place MODEL)

a physical entrance or exit to/from a STOP PLACE for a Passenger. May be a door, barrier, gate or other recognizable point of access

3.279

stop place space

(Stop Place MODEL)

a physical area within a STOP PLACE, for example, a QUAY, BOARDING POSITION, ACCESS SPACE or EQUIPMENT PLACE

3.280

stop place vehicle entrance

(Stop Place MODEL)

a physical entrance or exit to/from a STOP PLACE for a vehicle

3.281

stop point in journey pattern

(Service Pattern MODEL)

a POINT in a JOURNEY PATTERN which is a SCHEDULED STOP POINT

3.282

submode

(Reusable Transport Mode MODEL)

a variant of a MODE, as for instance international or domestic rail (rail being the MODE)

3.283

suitability

(Accessibility MODEL)

a statement of whether a particular USER NEED can be met. It can be used to state whether a SITE can be accessed by a passenger with a particular USER NEED

3.284

target passing time

(Passing Times MODEL)

time data about when a public transport vehicle should pass a particular POINT IN JOURNEY PATTERN on a particular DATED VEHICLE JOURNEY, in order to match the latest valid plan

3.285

tariff zone

(Generic Zone and Feature MODEL)

a ZONE used to define a zonal fare structure in a zone-counting or zone-matrix system

3.286

template service journey

(Service Journey MODEL)

a passenger carrying TEMPLATE SERVICE JOURNEY. As TEMPLATE SERVICE JOURNEY, it may represent multiple journeys

3.287

template vehicle journey

(Vehicle Journey MODEL)

a repeating VEHICLE JOURNEY for which a frequency has been specified, either as a HEADWAY JOURNEY GROUP (e.g. every 20 minutes) or a RHYTHMICAL JOURNEY GROUP (e.g. at 15, 27 and 40 minutes past the hour). It may thus represent multiple journeys

3.288

ticket scope

(Fare-Related Service Restriction MODEL)

scope of ticket

3.289

ticket validator equipment

(Ticketing Equipment MODEL)

specialisation of PASSENGER EQUIPMENT (PLACE EQUIPMENT) describing ticket validators

3.290

ticketing equipment

(Ticketing Equipment MODEL)

specialization of PASSENGER EQUIPMENT for ticketing

3.291

ticketing service

(Local Service Equipment MODEL)

specialization of LOCAL SERVICE for ticketing, providing ticket counter and online purchase information, also associated with payment method and TYPE OF TICKET

3.292

time band

(Service Calendar MODEL)

a period in a day, significant for some aspect of public transport, e.g. similar traffic conditions or fare category

3.293

time demand type

(Time Demand Type MODEL)

an indicator of traffic conditions or other factors which may affect vehicle run or wait times. It may be entered directly by the scheduler or defined by the use of TIME BANDS

3.294

time demand type assignment

(Time Demand Type MODEL)

the assignment of a TIME DEMAND TYPE to a TIME BAND depending on the DAY TYPE and GROUP OF TIMING LINKS

3.295

timetabled passing time

(Passing Times MODEL)

long-term planned time data concerning public transport vehicles passing a particular POINT IN JOURNEY PATTERN on a specified VEHICLE JOURNEY for a certain DAY TYPE

3.296

timing link

(Timing Pattern MODEL)

an ordered pair of TIMING POINTs for which run times may be recorded

3.297

timing link in journey pattern

(Journey Pattern MODEL)

the position of a TIMING LINK in a JOURNEY PATTERN. This entity is needed if a TIMING LINK is repeated in the same JOURNEY PATTERN, and separate information is to be stored about each iteration of the TIMING LINK

3.298

timing pattern

(Timing Pattern MODEL)

the subset of a JOURNEY PATTERN made up only of TIMING POINTs IN JOURNEY PATTERN

3.299

timing point

(Timing Pattern MODEL)

a POINT against which the timing information necessary to build schedules may be recorded

3.300

timing point in journey pattern

(Journey Pattern MODEL)

a POINT in a JOURNEY PATTERN which is a TIMING POINT

3.301

topographic place

(Topographic MODEL)

a geographical settlement which provides topographical context when searching for or presenting travel information, for example as the origin or destination of a trip. It may be of any size (e.g. County, City, Town, Village) and of different specificity e.g. Greater London, London, West End, Westminster, St James s.

A TOPOGRAPHICAL PLACE shall always have a canonical gazetteer name. It may be necessary to use the hierarchical topographical relationships of the TOPOGRAPHICAL PLACE to establish a unique context with which to distinguish between two TOPOGRAPHICAL PLACES with the same name

3.302

traffic control point

(Activation MODEL)

a POINT where the traffic flow can be influenced. Examples are: traffic lights (lanterns), barriers

3.303

train

(Train MODEL)

a VEHICLE TYPE composed of TRAIN ELEMENTs in a certain order, i.e. of wagons assembled together and propelled by a locomotive or one of the wagons

3.304

train block

(Vehicle Service MODEL)

a composite train formed of several BLOCKs coupled together during a certain period. Any coupling or separation action marks the start of a new TRAIN BLOCK

3.305

train block part

(Vehicle Service MODEL)

the position of a vehicle BLOCK within a TRAIN BLOCK

3.306

train component

(Train MODEL)

a specification of the order of TRAIN ELEMENTs in a TRAIN

3.307

train element

(Train MODEL)

an elementary component of a TRAIN (e.g. wagon, locomotive)

3.308

train in compound train

(Train MODEL)

the specification of the order of TRAINs in a COMPOUND TRAIN

3.309

train number

(Vehicle Journey MODEL)

specification of codes assigned to particular VEHICLE JOURNEYS when operated by TRAINs or COMPOUND TRAINs according to a functional purpose (passenger information, operation follow-up, etc)

3.310

train stop assignment

(Train Stop Assignment MODEL)

the association of a TRAIN COMPONENT at a SCHEDULED STOP POINT with a specific STOP PLACE and also possibly a QUAY and BOARDING POSITION

3.311

transfer

(Generic Place MODEL)

a couple of POINTs located sufficiently near that it may represent for a passenger a possibility to reach one of these POINTs when starting at the other one in a timescale which is realistic when carrying out a trip, e.g. CONNECTION, ACCESS

3.312

transfer end

(Generic Place MODEL)

end point of a TRANSFER

3.313

transfer restriction

(Routing Constraint MODEL)

a CONSTRAINT that can be applied on a CONNECTION or INTERCHANGE between two SCHEDULED STOP POINT, preventing or forbidding the passenger to use it

3.314

travel agent

(Additional Organisation MODEL)

specialisation of ORGANISATION for TRAVEL AGENT

3.315

travelator equipment

(Stair Equipment)

specialisation of PLACE EQUIPMENT for travelators (provides travelator properties like speed, etc.)

3.316

trolley stand equipment

(Site Equipment MODEL)

specialisation of STOP PLACE EQUIPMENT for trolley stands