

DIN CEN/TS 15531-4:2022-05 (E)

Public transport - Service interface for real-time information relating to public transport operations - Part 4: Functional service interfaces: Facility monitoring; English version CEN/TS 15531-4:2021

Contents		Page
European foreword.....		4
Introduction		5
1	Scope.....	7
2	Normative references.....	7
3	Terms and definitions	7
4	Symbols and abbreviations	7
5	Business Context	7
5.1	General.....	7
5.2	Overview of service function	7
5.3	Examples of Service Function	8
5.4	Use Cases	9
5.5	Use Cases: Capture and Origination of Facility Condition	10
5.5.1	General.....	10
5.5.2	CAPT#01 Facility Condition entered manually by operator staff.....	10
5.5.3	CAPT#02 Facility Condition updated manually by operator staff.....	10
5.5.4	CAPT#03 Facility Condition arising from automatic Facility Monitoring device (e.g. lift failure).....	10
5.5.5	CAPT#04 Facility Condition being generated automatically from a situation	10
5.5.6	CAPT#05 Workflow for verification, validation and editorial correction.....	10
5.5.7	CAPT#06 Providing of collective guidance of passengers.....	10
5.5.8	CAPT#07 Audit trails, retrospectives and process views.....	11
5.6	Use Cases: Relating Facility Conditions to other SIRI services	11
5.6.1	General.....	11
5.6.2	XREF#01 Problem affecting a specific vehicle journey	11
5.6.3	XREF#02 Problem at a stop place affecting some or all journeys for some or all modes	11
5.6.4	XREF#03 Problems affecting an interchange.....	11
5.6.5	XREF#04 Problems affecting particular classes of users, e.g. impaired mobility.....	11
5.7	Use Cases: Onwards Distribution to other systems (e.g. in TPEG and Datex2).....	11
5.7.1	General.....	11
5.7.2	DIST#01 Distribution of Facility Condition to displays.....	12
5.7.3	DIST#02 Distribution of Facility Condition to staff	12
5.7.4	DIST#03 Distribution of Facility Condition to external Systems	12
5.7.5	DIST#04 Distribution of Facility Condition to journey planners.....	12
5.7.6	DIST#04 Distribution of Facility Condition for recording Facility Failures	12
5.7.7	DIST#05 Distribution of Facility Condition to other systems	12
5.8	Use Cases: New Modes and Counting.....	12
5.8.1	General.....	12
5.8.2	NM#01 Provision of information about available vehicles and devices	12
5.8.3	NM#02 Provision of information about available spaces to bring a vehicle or a device back	13
5.8.4	NM#03 Provision of information about the updated location of a facility	13
6	Modelling Facilities in SIRI	13

6.1	General	13
6.2	Facility Model Overview.....	13
6.3	Facility Model Details.....	14
6.4	Facility Model Elements	16
6.4.1	General	16
6.4.2	Facility Condition.....	16
6.4.3	Facility	16
6.4.4	Facility Status.....	17
6.4.5	Remedy.....	18
6.4.6	Monitoring Info.....	18
6.4.7	Facility Monitored Counting.....	18
6.4.8	Facility Updated Position.....	19
6.4.9	Facility Types	19
7	Communication Infrastructure.....	24
7.1	General	24
7.2	SIRI Service Request table.....	24
7.3	Communications Bandwidth	26
8	Facilities Monitoring Service [FM].....	26
8.1	Purpose	26
8.2	UML Diagrams of Request and Response.....	27
8.2.1	SIRI-FM Request – Summary	27
8.2.2	SIRI-FM Request – Detail.....	28
8.2.3	SIRI-FM Delivery – Summary.....	30
8.2.4	SIRI-FM Delivery – Detail.....	31
8.3	Reference Data.....	31
8.4	Capability and Permission Matrices	32
8.4.1	Capability Matrix.....	32
8.4.2	Permission Matrix.....	33
8.5	FacilityMonitoringRequest	33
8.5.1	FacilityMonitoringRequest Definition	33
8.5.2	FacilityMonitoringRequest Example	36
8.6	FacilityMonitoringSubscriptionRequest.....	36
8.6.1	FacilityMonitoringSubscriptionRequest Definition.....	36
8.6.2	FacilityMonitoringSubscriptionRequest Example.....	37
8.7	FacilityMonitoringDelivery.....	38
8.7.1	General	38
8.7.2	ServiceDelivery with a FacilityMonitoringDelivery.....	38
8.7.3	FacilityMonitoringDelivery Element	38
8.7.4	FacilityCondition Element.....	39
8.7.5	FacilityMonitoringDelivery Example	56
	Bibliography	58