

# ISO 13111-2:2022-07 (E)

## Intelligent transport systems (ITS) - The use of personal ITS stations to support ITS service provision for travellers - Part 2: General requirements for data exchange between ITS stations

Contents		Page
Foreword	.....	vi
Introduction	.....	vii
1	Scope	1
2	Normative references	1
3	Terms, definitions and abbreviated terms	1
3.1	Terms and definitions	1
3.2	Abbreviated terms	2
4	General requirements	3
5	Use case implementations	3
5.1	Use case clusters overview	3
5.2	Use case implementations	5
5.2.1	Get positioning information by accessing a roadside station through the P-ITS-S and R-ITS-S interaction interface	5
5.2.2	Requesting slow transport and local transport information service	7
5.2.3	Requesting the safety evacuation passageway or emergency service	9
5.2.4	Transfer information service in the parking lot	10
5.2.5	Requesting the transfer information service in an integrated transportation hub	12
5.2.6	Traffic and public transport information service via P2C or P2R interaction interface	14
5.2.7	Trip planning for travellers with a personal ITS station	15
5.2.8	Vehicle service through the P2V interaction interface	17
5.2.9	Share location through the interaction interface between the personal stations	19
5.2.10	Team travel	21
6	Message set	22
6.1	Get positioning information by accessing a roadside station through the P-ITS-S and R-ITS-S interaction interface	22
6.1.1	available_positioning_service	22
6.1.2	position_service_list	23
6.1.3	selected_position_service	23
6.1.4	position_info_collection	24
6.1.5	position_service_CITS	24
6.1.6	current_position_info	25
6.1.7	return_status	25
6.1.8	roadside_request	26
6.1.9	roadside_info_list	26
6.2	Requesting to download and update local transport network data	27
6.2.1	local_transportnetwork	27
6.2.2	get_datapackage	27
6.2.3	slowtransport_navi	29
6.2.4	optimal_slowtransport_navi_path	29
6.2.5	search_surrounding_facilities	30
6.2.6	surrounding_facilities	30
6.2.7	search_surrounding_commercial	31

6.2.8	surrounding_commercial_info .....	31
6.3	Requesting the safety evacuation passageway or emergency service .....	32
6.3.1	safety_evacuation_passageway .....	32
6.3.2	optimal_navigation_path .....	32
6.3.3	emergency_info .....	33
6.3.4	sending_status .....	34
6.3.5	request_rescue_info .....	34
6.3.6	Rescue_info .....	34
6.3.7	emergency_status .....	35
6.4	Transfer information service in the parking lot .....	35
6.4.1	request_surrounding_parking .....	35
6.4.2	surrounding_parking_info .....	36
6.4.3	get_surrounding_traffic .....	36
6.4.4	surrounding_realtime_map .....	37
6.4.5	surrounding_realtime_traffic_info .....	37
6.4.6	request_parking_facility .....	38
6.4.7	surrounding_facility_info .....	38
6.4.8	parkinglot_indoor_navigation .....	39
6.4.9	optimal_parkinglot_path .....	39
6.4.10	Request_car_POS .....	40
6.4.11	parkinglot_car_POS .....	40
6.4.12	car_POS_info .....	40
6.4.13	request_pedestrian_path .....	41
6.4.14	optimal_pedestrian_path .....	42
6.5	Requesting the transfer information service in an integrated transportation hub .....	42
6.5.1	public_transport_timetable .....	42
6.5.2	public_transport_time .....	43
6.5.3	request_public_transport .....	43
6.5.4	public_transport_location .....	44
6.5.5	request_transfer_info .....	44
6.5.6	optimal_transfer_path .....	45
6.5.7	request_express_channel .....	45
6.5.8	optimal_security_path .....	46
6.6	Traffic and public transport information service via P2C or P2R interaction interface .....	47
6.6.1	request_public_transport .....	47
6.6.2	optimal_public_transport_path .....	47
6.6.3	request_traffic_info .....	48
6.6.4	road_traffic_info .....	48
6.6.5	request_public_transport_info .....	48
6.6.6	public_transport_vehicle_status .....	49
6.6.7	request_realtime_transfer_info .....	49
6.6.8	surrounding_realtime_transfer_map .....	50
6.6.9	surrounding_realtime_transfer_info .....	50
6.7	Trip planning for travellers with a personal ITS station .....	51
6.7.1	search_POI .....	51
6.7.2	POI_info .....	51
6.7.3	planning_route .....	52
6.7.4	planningroute_return_status .....	53
6.7.5	request_route_info .....	53
6.7.6	route_return_status .....	53
6.7.7	request_modify_trip .....	54
6.7.8	modifytrip_return_status .....	54
6.7.9	request_pasttrip_info .....	55
6.7.10	pasttrip_return_status .....	55
6.7.11	Definition of request_multimodal_navigation_info .....	55
6.7.12	multimodal_optimal_navigationpath .....	56
6.8	Vehicle service through the P2V interaction interface .....	57
6.8.1	request_vehicle_status .....	57
6.8.2	vehicle_status .....	57
6.8.3	request_vehicle_info .....	57
6.8.4	vehicle_info .....	58

6.8.5	request_vehicle_equipment .....	58
6.8.6	vehicle_equipment_status .....	58
6.8.7	remote_control .....	59
6.8.8	sending_status .....	59
6.8.9	execution_status .....	60
6.8.10	mirror_link .....	60
6.9	Share location through the interaction interface between the personal stations .....	60
6.9.1	request_open_POS .....	60
6.9.2	request_participate_activity .....	61
6.9.3	request_info_sharing .....	61
6.9.4	shared_info .....	62
6.9.5	request_help .....	62
6.9.6	help_info .....	62
6.9.7	remove_linkage .....	63
6.10	Team travel .....	63
6.10.1	join_team .....	63
6.10.2	request_team_info .....	63
6.10.3	team_info .....	64
6.10.4	request_leading_vehicle .....	64
6.10.5	leading_vehicle_trajectory .....	64
6.10.6	member_location .....	65
6.10.7	request_close_tracking .....	65
Annex A (normative) ASN.1 module .....		67
Bibliography .....		69