

ISO/TS 15638-18:2013-07 (E)

Intelligent transport systems - Framework for collaborative Telematics Applications for Regulated commercial freight Vehicles (TARV) - Part 18: ADR (Dangerous Goods) transport monitoring (ADR)

Contents		Page
Foreword		v
Introduction		vii
1	Scope	1
2	Conformance	1
3	Normative references	2
4	Terms and definitions	2
5	Symbols and abbreviated terms	7
6	General overview and framework requirements	9
7	Requirements for services using generic vehicle data	9
8	Application services that require data in addition to basic vehicle data	9
8.1	General	9
8.2	Quality of service requirements	9
8.3	Test requirements	10
8.4	Marking, labelling and packaging	10
9	Common features of regulated TARV application services	10
9.1	General	10
9.2	Common role of the jurisdiction, approval authority, service provider and user	11
9.3	Common characteristics for instantiations of regulated application services	11
9.4	Common sequence of operations for regulated application services	11
9.5	Quality of service	11
9.6	Information security	11
9.7	Data naming content and quality	12
9.8	Software engineering quality systems	12
9.9	Quality monitoring station	12
9.10	Audits	12
9.11	Data access control policy	12
9.12	Approval of IVSs and service providers	12
10	TARV ADR consignment monitoring (ADRM)	12
10.1	ADRM service description and scope	12
10.1.1	ADRM use case	13
10.1.2	Description of ADRM regulated application service	13
10.2	Concept of operations for ADRM	14
10.2.1	General	14
10.2.2	Statement of the goals and objectives of ADRM	14
10.2.3	Strategies, tactics, policies, and constraints affecting ADRM	14
10.2.4	Organisations, activities, and interactions among participants and stakeholders in ADRM	15
10.2.5	Clear statement of responsibilities and authorities delegated for ADRM	16

10.2.6	Operational processes for the ADRm	16
10.2.7	Role of ADRm service provider	17
10.2.8	Role of ADRm user	17
10.3	Sequence of operations for ADRm	17
10.4	ADRm naming content and quality	18
10.5	Specific ADRm data naming content and quality	18
10.6	ADRm service elements	19
10.6.1	ADRm SE1: Establish jurisdiction regulations or system specification for ADR monitoring	19
10.6.2	ADRm SE2: Request system approval	19
10.6.3	ADRm SE3: User (operator) contracts with prime service provider	19
10.6.4	ADRm SE4: User (operator) equips vehicle with a means to provide consignment data ...	19
10.6.5	ADRm SE5: User contracts with application service provider	19
10.6.6	ADRm SE6: application service provider uploads software into the TARV equipped vehicles of the operator	19
10.6.7	ADRm SE7: Recording of vehicle consignment data	20
10.6.8	ADRm SE8: ADRm Trigger	20
10.6.9	ADRm SE9: Contact predetermined IPv6 address	20
10.6.10	ADRm SE10: Obtain consignment data	21
10.6.11	ADRm SE11: `Interrogated' request for ADR data	21
10.6.12	ADRm SE12: Notification to operator	21
10.7	ADRm access methods to provision and retrieve data	22
10.8	ADRm application service specific provisions for quality of service	27
10.9	ADRm application service specific provisions for test requirements	27
10.10	ADRm application specific rules for the approval of IVSs and `Service Providers'	27
11	Declaration of patents and intellectual property	28
Annex A (informative) Independent testing of the protocols defined in this part of ISO 15638		29
A.1	Objectives	29
A.2	TEST SCRIPT SERVICE: ADR Dangerous Goods	31
CTP 10.1.1	Instigated ADR - Dangerous Goods Monitoring using 2G	36
CTP 10.1.2	Interrogated ADR - Dangerous goods monitoring using 2G	38
CTP 10.1.3	Interrogated ADR - Dangerous goods monitoring using 5.9GHz and responding using 2G or 3G	40
CTP 10.2.1	Instigated ADR - Dangerous goods monitoring using 3G	42
CTP 10.2.2	Interrogated at 5.9 GHz and send of ADR - Dangerous goods monitoring using 3G	44
CTP 10.3.1	Instigated ADR - Dangerous goods monitoring using 802.11p (WAVE) 5.9 GHz	46
CTP 10.3.2	Interrogated ADR - Dangerous goods monitoring using 802.11p (WAVE) 5.9 GHz	48
CTP 10.4.1	Instigated ADR - Dangerous goods monitoring using Mesh WiFi	50
CTP 10.4.2	Interrogated ADR - Dangerous goods monitoring using Mesh WiFi	52
Bibliography		54