ISO/TR 4445:2021-09 (E)

Intelligent transport systems - Mobility integration - Role model of ITS service application in smart cities

Contents

Page

Foreword v

Introduction vi

1 Scope 1

2 Normative references 1

3 Termsanddefinitions 1

4 Abbreviated terms 2

5 General overview and framework 3
5.1 Objective 3
5.2 National variations 3
5.3 Mandatory, optional and cooperative issues 3
5.4 Specification of service provision 3
5.5 Architecture options 3

6 Concept of operations 4
6.1 General 4
6.2 Statement of the goals and objectives of the system 4
6.3 Strategies, tactics, policies, and constraints affecting the system 4
6.4 Organizations, activities and interactions among participants and stakeholders 4
6.5 Clear statement of responsibilities and authorities delegated 4
6.6 Operational processes for the system 5
6.6.1 General 5
6.6.2 Service requirements definition 5
6.7 Appointment of an approval authority (regulatory) 5
6.8 In-vehicle system 5
6.9 User 5
6.10 Application service 6
6.11 Big data management entity 6
6.12 Data aggregator 6

7 Conceptual architecture framework 6
7.1 General 6
7.2 Actors 6
7.3 Service definition 8
7.4 Role model architecture 8
7.4.1 General 8
7.4.2 Jurisdictions 9
7.4.3 Application service actors 9
7.4.4 Service provider(s) 10
7.4.5 The OBE equipment installer 10
7.4.6 The OBE equipment maintainer 10
7.4.7 Approval authority (regulatory) 11
7.4.8 Security credential management system/public key infrastructure 11
7.4.9 Certification authority (digital) 12
7.4.10 Application service approval 12
7.4.11 Onboard equipment OBE approval 12

7.4.12 Vehicle user 14
7.4.13 Application service provision 15

8 Communications architecture 15

9 Quality of service requirements 15

10 Test requirements 16

11 Marking, labelling and packaging 16

12 Declaration of patents and intellectual property 16

Annex A (informative) ITS data management architecture 17

Bibliography 36