## ISO 17573-1:2019 (E)

# Electronic fee collection — System architecture for vehicle-related tolling — Part 1: Reference model

### Contents

Foreword

#### Introduction

- 1 Scope
- 2 Normative references
- 3 Terms and definitions
- 4 Symbols and abbreviated terms
  - 4.1 Symbols
  - 4.2 Abbreviated terms
- 5 The EFC community: roles and objectives
  - 5.1 General
  - 5.2 Other ITS systems and services
  - 5.3 Sensors, vehicle system and common equipment
  - 5.4 Infrastructure sourced data
  - 5.5 Financial/Commercial systems
  - 5.6 Telecommunication systems
  - 5.7 Jurisdiction/Authorities
  - 5.8 Standardisation bodies
  - 5.9 Common service rights provider
- 6 Roles internal to the EFC domain
  - 6.1 General
  - 6.2 EFC domain roles
  - 6.3 Interoperability manager
  - 6.3.1 Short description
  - 6.3.2 Responsibilities
  - 6.4 Toll service provider
  - 6.4.1 Short description
  - 6.4.2 Responsibilities
  - 6.5 User of the service
  - 6.5.1 Short description
  - 6.5.2 Responsibilities
  - 6.6 Toll charger role
  - 6.6.1 Short description
  - 6.6.2 Responsibilities
  - 6.7 EFC functional roles and responsibilities

#### 7 Services

- 7.1 Overview
- 7.2 Sub-services involving toll charger, toll service provider and interoperability manager roles
- 7.2.1 Adding or deleting a new toll charger
- 7.2.2 Adding or deleting a new toll service provider
- 7.2.3 Adding or modifying a toll regime
- 7.2.4 Defining rules
- 7.2.5 Monitoring operations
- 7.2.6 Handling disputes
- 7.3 Sub-services involving the toll service provider and user

- 7.3.1 Providing EFC contract
- 7.3.2 Providing customer care
- 7.3.3 User billing
- 7.4 Sub-services involving the toll charger and toll service provider
- 7.4.1 Collecting transit information in short-range communication systems
- 7.4.2 Collecting charging information (autonomous systems)
- 7.4.3 Collecting transit information (not OBE-based systems)
- 7.4.4 Providing payment information
- 7.4.5 Detecting Exceptions
- 7.4.6 Trust objects exchange
- 7.4.7 Handling exceptions
- 7.4.8 Providing local information

#### Annex A (informative) Mapping EFC architecture to the C-ITS architecture

- A.1 General
- A.2 System operation and Functional operation roles
- A.2.1 System operation role
- A.2.2 Functional operation

#### Annex B (informative) Information schemata and basic information types

- B.1 General
- B.2 Static schema
- B.3 Basic information objects
- B.4 EFC rules
- B.4.1 Transit information
- B.4.2 Operational information
- B.4.3 Payment information
- B.5 Dynamic schema

#### Annex C (informative) Enterprise objects within roles

- C.1 General
- C.2 Toll service provider
- C.2.1 General
- C.2.2 Organisational level
- C.2.3 Equipment level
- C.2.4 Transport service level
- C.3 User of the toll service
- C.3.1 General
- C.3.2 Organisational level
- C.3.3 Equipment level
- C.3.4 Transport service level
- C.4 Charger of the toll
- C.4.1 General
- C.4.2 Organisational level
- C.4.3 Equipment level
- C.4.4 Transport service level

Page count: 48