E DIN EN ISO 17575-2:2014-02 (E)

Electronic fee collection - Applicatio n interface definition for autonomous systems - Part 2: Communication and connection to the lower layers (ISO/DIS 17575-2:2013); English version prEN ISO 17575-2:2013

Contents

Page

Foreword v

Introduction vi

1 Scope 1

2 Normative references 1

3 Terms and definitions 2

4 Abbreviations 4

5 EFC Front End communication architecture 4
5.1 General 4
5.2 Relations to the overall EFC architecture 5

6 Initialize transactions 5
6.1 General 5
6.2 Addressing requested parts of a hierarchical data element structure 6
6.3 Identifying payloads for transmission 6

7 EFC communication services (functions) 6
7.1 General concept 6
7.2 Initialization phase 7
7.2.1 General 7
7.2.2 Incoming (BE to FE Application) Session Request 8
7.2.3 Outgoing (FE Application to BE) session establishment 8
7.3 Point-to-point communication service primitives 8
7.3.1 General 8
7.3.2 Unstructured messages (ADUs) 9
7.3.3 Structured messages (ADUs) 9
7.4 Session ending 9
7.5 Session failure 9
7.6 Security considerations 9
7.7 Media selection options 10

8 The use of a communication stack 10
8.1 General 10
8.2 Requirements on a underlying communication technology 10
8.3 Mobile terminated calls 10

Annex A (normative) Abstract API definition 11

A.1 General 11
A.2 Down API (Front End Application to communications stack) 11
A.2.1 InitialiseInstance 11
A.2.2 SetParameter 11
A.2.3 GetParameter 11
A.2.4 DeleteParameter 12

A.2.5 StackAvail ... 12
A.2.6 DropInstance ... 12
A.2.7 StartSession ... 12
A.2.8 EndSession ... 13
A.2.9 SendUnformattedADU ... 13
A.2.10 SendADUSetStart ... 13
A.2.11 SendADU ... 13
A.2.12 SendADUSetEnd ... 14
A.2.13 CommsQuery ... 14

E DIN EN ISO 17575-2:2014-02 ² (QWZXUI ² ISO/DIS 17575-2 A.3 Up API (Communications Stack to Front End Application) ... 14

A.3.1 InstanceStateChange ... 14
A.3.2 UnformattedADUReceived ... 15
A.3.3 ADURequest ... 15
A.3.4 ADUReceived ... 15
A.3.5 ADUSent ... 15
A.3.6 ADUSendOK ... 15
A.3.7 SessionRequest ... 15

Annex B (normative) Protocol implementation conformance statement (PICS) proforma ... 16

B.1 Introduction ... 16
B.2 Transactions support ... 16
B.2.1 General ... 16
B.2.2 Support of the down API ... 16
B.2.3 Support of the Up API ... 18
B.3 Use of communication stacks ... 19
B.3.1 Supported communication stacks ... 19
B.4 Front End Storage capacity ... 20
B.4.1 Storage capacity for modules and contact details ... 20
B.4.2 Generic values ... 20
B.4.3 Security of communication ... 20

Annex C (informative) API requirements ... 21

C.1 Introduction ... 21
C.1.1 General ... 21
C.1.2 Non-functional requirements ... 21
C.1.3 Functional requirements ... 21

Annex D (informative) Examples of definitions for appropriate languages ... 22

D.1 General ... 22
D.2 API Definition in C ... 22

Annex E (informative) Example of message flow ... 25

Annex F (informative) Use of this standard for the EETS ... 26

F.1 General ... 26
F.2 Overall relationship between European standardisation and the EETS ... 26
F.3 European standardisation work supporting the EETS ... 26
F.4 Correspondence between this standard and the EETS ... 27

Bibliography ... 28