

DIN EN 15320:2008-02 (Eng lisch)

Identification card systems - Surface transport applications - Interoperable Public Transport Applications - Framework

Contents		Page
Foreword		6
Introduction		7
1 Scope		9
2 Normative references		10
3 Terms and definitions		10
4 Symbols and abbreviated terms		14
5 Basic structure of application components)		15
6 Data groups		17
7 The abstract interface		24
8 Application security		33
9 Profiles		40
Transport Application		143
Bibliography		149
Annex H (normative) Relationship between legacy systems and the Interoperable Public Annex A (normative) Data group definitions		44
Annex B (normative) Identification and mapping of data groups		48
Annex C (normative) EN 1545 data elements enumerated for use in the application		72
Annex D (normative) ASN.1 Tag allocations		86
Annex F (informative) Examples		103
Annex G (informative) Accessing the Interoperable Public Transport Application		140
Annex I (informative) Supporting Legacy Systems		146
Annex E (informative) General requirements		95
List of Figures Figure 1 -- Interoperable Fare Management system		8
Figure 2 -- Data element within a data object		15
Figure 3 -- Data structure		16
Figure 4 -- Data group		16

Figure 5 -- Relationships between the data groups	17
Figure 6 -- Data group contents	22
Figure 7 -- Product data group with fixed and variable parts	22
Figure 8 -- The application environment links the data groups together	23
Figure 9 -- Relationships between the logical interfaces, the SSS and the card and terminal	24
Figure 10 -- Logical interface 1: the card data interface	26
Figure 11 -- Logical interface 2: the data group interface	27
Figure 12 -- A representative application command flow	32
Figure 13 -- Application states	33
Figure 14 -- Data group Control Data Structure	39
Figure 15 -- A Control Data Structure entry	39
Figure 16 -- Profile ID structure	41
Figure 17 -- Profile derivation	43
Figure E.1 -- The Interoperable Public Transport Application	96
Figure E.2 -- Products within the Interoperable Public Transport Application	96
Figure E.3 -- Interoperable Public Transport Application product usage	97
Figure G.1 -- Card and application activation	140
Figure H.1 -- Application wrapper	144
Figure H.2 -- Inter-environment operation	144
Figure H.3 -- Interoperable Public Transport Application stub	145
Figure H.4 -- Hierarchy of access	145
Figure I.1 -- Interoperable Public Transport Compliant application	148
List of Tables Table 1 -- Card data interface functions	26
Table 2 -- Data group interface functions	27
Table 3 -- Application activities and use cases	29
Table 4 -- Access mode byte specification	40
Table A.1 -- Data Group Identification	44
Table A.2 -- Data structures within data groups	45
Table B.1 -- Application environment specific mandatory data structures	48
Table B.2 -- Event log specific mandatory data structures	50
Table B.3 -- General mandatory data structures	51

Table B.4 -- Type A optional data structures	55
Table B.5 -- Type L data structures	64
Table B.6 -- Cyclic event log data structure	70
Table C.1 -- Application data elements fully specified in EN 1545	72
Table C.2 -- Application data elements not fully specified in EN 1545	76
Table C.3 -- Application data elements not included in EN 1545	83
Table F.1 -- Example of a label	103
Table F.2 -- Example of an instance identifier	103
Table F.3 -- Example of a seal	103
Table F.4 -- Concession; creation of holder ID and entitlement	104
Table F.5 -- Concession: creation of validity	105
Table F.6 -- Concession: use of concession	106
Table F.7 -- Carnet: customer purchases the carnet	108
Table F.8 -- Carnet: a journey is made	109
Table F.9 -- Carnet: a further journey is made	110
Table F.10 -- Carnet: top-up of rides	111
Table F.11 -- Check in/ Check out: Stored Travel Rights availability	112
Table F.12 -- Check in / Check out: Check In	113
Table F.13 -- Check in/ Check out: Check out	114
Table F.14 -- Check in/ Check out: Stored Travel Rights usage	115
Table F.15 -- Check in/ Check out: the journey continues	115
Table F.16 -- Check in/ Check out: further Stored Travel Rights usage	117
Table F.17 -- Be in/ be out: entitlement to ride	118
Table F.18 -- Be in / be out: after boarding	118
Table F.19 -- Be in / be out: the journey continues	119
Table F.20 -- Streifenkarte: purchasing for cash	120
Table F.21 -- Streifenkarte: boarding the vehicle	121
Table F.22 -- Streifenkarte: further journeys	122
Table F.23 -- Rail travel: reservation	124
Table F.24 -- Rail travel: a journey is made	125
Table F.25 -- RET: a ticket is purchased	127

Table F.26 -- RET: Check in	129
Table F.27 -- RET: Check out	130
Table F.28 -- RET: Check in next leg	132
Table F.29 -- RET: Check out next leg	133
Table F.30 -- RET: Check in return journey	134
Table F.31 -- RET: Check out return journey	136
Table F.32 -- Zonal fare scheme: a ticket is purchased	138
Table F.33 -- Zonal fare scheme: the ticket is used	139
Table G.1 -- Responses of known cards types	141