

ISO/IEC 18012-3:2025-07 (E)

Information technology - Home electronic system (HES) - Guidelines for product interoperability - Part 3: Lexicon

Contents	Page
FOREWORD.....	13
INTRODUCTION.....	15
0.1 Overview	15
0.2 Relation to existing work	15
0.3 Lexicon and event encoding	16
1 Scope.....	18
2 Normative references	18
3 Terms, definitions, abbreviated terms and conventions	18
3.1 Terms and definitions	18
3.2 Abbreviated terms	21
3.3 Conventions.....	21
3.3.1 Data formats	21
3.3.2 Memory storage and access types.....	26
3.3.3 Address and data types.....	27
4 Conformance requirements	28
5 HES lexicon concepts, principles	29
5.1 General.....	29
5.2 Communicating “HES lexicon” on media	29
6 Object concepts.....	29
6.1 Overview of object concepts	29
6.2 User object concepts.....	31
6.3 Binding map object concepts	32
6.4 Service object concepts.....	32
6.5 Interface object concepts	32
6.6 Remote object concepts	32
7 Action concepts	32
7.1 Overview	32
7.2 Communicating “functional actions” on media	33
8 Objects – Detailed HES lexicon.....	33
9 User objects – Detailed HES lexicon	33
9.1 User objects short form	33
9.2 User object components.....	34
9.3 Common objects and structures.....	34
9.3.1 currentValue	34
9.3.2 previousValue	39
9.3.3 compareValue.....	39
9.4 Application domains	39
9.4.1 Current application domains	39
9.4.2 Energy management domain	41
9.4.3 Lighting domain	41
9.4.4 Utility domain.....	42
9.4.5 HVAC domain	44
9.4.6 Convenience domain.....	45
9.4.7 User interface domain	46
9.4.8 Audio and video domain	46
9.4.9 Telecommunications domain	47

9.4.10	Security domain	47
9.4.11	Appliance domain	48
9.4.12	Common user interface domain	48
9.4.13	Safety cluster domain.....	49
9.4.14	Electric vehicle domain	49
9.4.15	General domain	50
10	Binding map objects – Detailed HES lexicon	50
10.1	Overview	50
10.2	Mathematical and logical operations	51
10.3	Conditioning.....	51
10.4	Adjustment.....	52
10.5	Operation table	52
10.6	Addressing table	54
10.7	Binding map overall aspects	55
10.8	Operation table and addressing table.....	56
11	Service objects – Detailed HES lexicon	60
11.1	Service module	60
11.2	Services.....	60
11.2.1	General	60
11.2.2	Identification service (foundational)	61
11.2.3	Time service (foundational)	65
11.2.4	Authorization and authentication service (foundational).....	73
11.2.5	Cryptographic service (foundational)	80
11.2.6	Common user interface service	82
11.2.7	Cluster to cluster service	82
11.2.8	Artificial intelligence service	82
11.2.9	Energy management service	82
11.2.10	Electrical energy measuring system service.....	82
11.2.11	Web-based energy service	82
11.2.12	Audio gateway service	82
11.2.13	IGRS RA agent service	82
12	Interface objects – Detailed HES lexicon	83
12.1	General interface objects	83
12.2	HAN interface objects.....	83
12.2.1	General	83
12.2.2	Overview	83
12.2.3	HAN interface module discovery of HES gateway modules.....	84
12.2.4	HAN interface module central operations	85
12.2.5	HAN interface module attached network	86
12.2.6	HAN interface module configuration mode	87
12.2.7	HAN interface module privacy, security and safety.....	88
12.2.8	HAN interface module example - ISO/IEC 14543-4-302.....	90
12.3	WAN interface objects and actions	94
12.3.1	General	94
12.3.2	WAN interface module discovery of HES gateway modules	94
12.3.3	WAN interface module central operations	95
12.3.4	WAN interface module attached network.....	96
12.3.5	WAN interface module privacy, security, safety, and traffic	97
12.3.6	WAN interface module overall WAN channel services	99

12.3.7	WAN interface module channel service table	99
12.3.8	WAN interface module privacy, security, safety, traffic for WAN channel	101
13	Remote objects – detailed HES lexicon	104
13.1	General.....	104
13.2	Common objects and structures.....	104
13.2.1	currentValue	104
13.2.2	previousValue	106
13.2.3	compareValue.....	106
13.2.4	Other properties.....	107
13.3	Remote object domains	107
13.3.1	General	107
13.3.2	Environmental domain.....	108
13.3.3	Common area domain	109
13.3.4	Indirect GHG domain.....	109
14	Actions – Detailed HES lexicon	110
Annex A (normative)	Binding map service	111
A.1	Overview	111
A.2	Value operation.....	114
A.2.1	General	114
A.2.2	Mathematical and logical operations	115
A.2.3	Table of operations	117
A.2.4	Conditioning	117
A.2.5	Adjustment	117
A.2.6	Examples of using the “Value Operation”	118
A.2.7	Address redirection.....	119
A.2.8	Operation table	121
Annex B (informative)	Example of operation group	126
Annex C (normative)	WAN interface module	129
C.1	WAN interface objects and actions	129
C.2	WAN interface module objects.....	129
C.3	WAN interface channel objects	130
C.4	WAN communication with other HES gateway systems	133
Annex D (informative)	Authorization service examples.....	135
D.1	Parent and kid authorization example	135
D.2	Limit incoming packets example	139
Annex E (normative)	Semantic meaning	143
E.1	Semantic meaning.....	143
E.2	HAN message meaning conveyed by HAN lexicon specification	143
E.3	HAN message meaning conveyed by generic HAN specification.....	144
E.4	All interface modules and all network messages	145
Annex F (normative)	Detailed HES lexicon for user objects.....	146
F.1	Detailed HES lexicon.....	146
F.2	Energy management domain	146
F.2.1	General	146
F.2.2	Power buses	146
F.2.3	Energy management domain summary	148
F.2.4	Energy management domain power bus retrieval	148
F.3	Lighting domain.....	151

F.3.1	General	151
F.3.2	Lighting domain summary.....	151
F.3.3	Lighting domain digital actuator.....	152
F.3.4	Lighting domain digital sensor	154
F.3.5	Lighting domain analog actuator.....	157
F.3.6	Lighting domain analog sensor.....	159
F.4	Utility domain	161
F.4.1	Utility domain summary	161
F.4.2	Utility domain electrical AC power sensor	164
F.4.3	Utility domain electrical DC power sensor.....	166
F.4.4	Utility domain electrical AC current sensor.....	170
F.4.5	Utility domain electrical DC current sensor.....	173
F.4.6	Utility domain DC voltage sensor.....	176
F.4.7	Utility domain electrical AC voltage sensor	179
F.4.8	Utility domain electrical energy current sensor (cumulative)	182
F.4.9	Utility domain electrical AC energy sensor (within time period).....	185
F.4.10	Utility domain electrical frequency sensor	189
F.4.11	Utility domain AC power factor sensor	192
F.4.12	Utility domain energy storage operation mode.....	195
F.4.13	Utility domain energy storage remaining	198
F.4.14	Utility domain electrical reactive power sensor.....	201
F.4.15	Utility domain electrical apparent power sensor	204
F.4.16	Utility domain electrical reactive energy sensor (cumulative).....	207
F.4.17	Utility domain electrical apparent energy sensor (cumulative).....	210
F.4.18	Utility domain harmonic distortion	213
F.5	User interface domain	216
F.5.1	User interface domain summary	216
F.5.2	User interface digital sensor.....	217
F.5.3	User interface string sensor.....	219
F.5.4	User interface digital actuator.....	223
F.5.5	User interface string actuator	225
	Bibliography	228

Figure 1 – ISO/IEC 18012-3 within the core interoperability and HES gateway standards	17
Figure 2 – Types of objects in the HES gateway	30
Figure 3 – Short form formats for objects in the HES lexicon.....	31
Figure 4 – Short form formats for functional actions in the HES lexicon	33
Figure 5 – Overview of user objects	34
Figure 6 – Access direction of “in” (Sensor).....	37
Figure 7 – Access direction of “out” (Actuator).....	37
Figure 8 – Functionality of binding maps	51
Figure 9 – Components within an operation group of a binding map.....	52
Figure 10 – Components within the addressingTable	54
Figure 11 – Overview of service	60
Figure 12 – Time service block diagram	66
Figure 13 – Overview of interface objects	83

Figure 14 – ISO/IEC 14543-4-302 communications	91
Figure 15 – HES gateway to ISO/IEC 14543-4-302 electrical storage system	91
Figure 16 – Other controllers can use the ISO/IEC 14543-4-302 electrical storage system	92
Figure 17 – Access to WAN interface objects	94
Figure 18 – Components within a channel of a WAN interface module.....	100
Figure A.1 – Service module	111
Figure A.2 – Binding map example (switch and light)	112
Figure A.3 – Binding map controller setup	112
Figure A.4 – Real time operation of binding map.....	113
Figure A.5 – Functionality of binding map	113
Figure A.6 – Object conversion	114
Figure A.7 – Object conversion	115
Figure A.8 – Authorization.....	115
Figure A.9 – Multiple source and destination values	115
Figure A.10 – Address redirection	119
Figure A.11 – Address referencing in binding map.....	120
Figure A.12 – Addressing referencing for clusters in binding map.....	121
Figure A.13 – List of operation groups in a binding map.....	122
Figure A.14 – Components within an operation group of a binding map.....	122
Figure A.15 – Components within the addressingTable.....	124
Figure B.1 – Inputs	126
Figure B.2 – Source addressing	126
Figure B.3 – Source object.....	126
Figure B.4 – Goes above	127
Figure B.5 – Pass through.....	127
Figure B.6 – Outputs.....	127
Figure B.7 – Destination addressing.....	127
Figure B.8 – Destination object	128
Figure B.9 – Light on	128
Figure C.1 – Access to WAN interface objects.....	129
Figure C.2 – Types of WAN interface objects.....	129
Figure C.3 – WAN interface module objects.....	130
Figure C.4 – Remote services through WAN interface module.....	130
Figure C.5 – Example of remote servers through a WAN interface module	131
Figure C.6 – Channel access through a WAN interface module	131
Figure C.7 – Authorization and translation for each channel.....	132
Figure C.8 – Settings of WAN interface module	132
Figure C.9 – WAN interface channel objects.....	133
Figure C.10 – Service originating from outside the HES gateway system.....	133
Figure D.1 – Parent full control.....	135
Figure D.2 – Kid partial control.....	135
Figure D.3 – Authorization updates binding map.....	136

Figure D.4 – Parent and kid data in the authorization tables.....	137
Figure D.5 – Parent authorization example	138
Figure D.6 – Kid authorization example	139
Figure D.7 – Authorization updates HAN interface module	140
Figure D.8 – Unlimited Incoming Packet Example	141
Figure D.9 – Limited incoming packet example	142
Figure E.1 – HAN with semantic specification	144
Figure E.2 – HAN with generic HAN specification	145
Figure F.1 – Device interaction to power buses	146
Figure F.2 – List of power bus groups	147
Figure F.3 – Components within a power bus group.....	147
Figure F.4 – Electrical AC power sensor element model	164
Figure F.5 – Electrical DC power sensor element model	167
Figure F.6 – Electrical AC current sensor element model	170
Figure F.7 – Electrical DC current sensor element model.....	173
Figure F.8 – DC voltage sensor element model	176
Figure F.9 – AC voltage sensor element model.....	179
Figure F.10 – Electrical energy sensor element model (cumulative)	182
Figure F.11 – Electrical energy sensor element model (within a time period)	185
Figure F.12 – Electrical frequency sensor element model	189
Figure F.13 – Power factor sensor element model	192
Figure F.14 – Energy storage mode element model	195
Figure F.15 – Energy storage remaining energy	198
Figure F.16 – Electrical reactive power sensor element model	201
Figure F.17 – Electrical apparent power sensor element model.....	204
Figure F.18 – Electrical reactive energy sensor element model (cumulative)	207
Figure F.19 – Electrical apparent energy sensor element model (cumulative).....	210
Figure F.20 – Total harmonic distortion	213
Figure F.21 – Single button.....	219
Figure F.22 – Row of buttons	219
Figure F.23 – Row of buttons example	220
Figure F.24 – Touch screen with virtual buttons.....	220
Figure F.25 – Example for touch screen with virtual buttons.....	220
Table 1 – Defined types of dataFormat.....	21
Table 2 – Memory storage and access types (memoryType)	27
Table 3 – dataPurpose ('dp') parameter.....	28
Table 4 – addrPoint ('ap').....	28
Table 5 – storageType ('st')	28
Table 6 – Pre-Market currentValue metaData	34
Table 7 – Post-Market currentValue metaData.....	38
Table 8 – currentValue interactiveData.....	38
Table 9 – Pre-Market compareValue metaData.....	39

Table 10 – Post-Market compareValue metaData	39
Table 11 – Application domains.....	40
Table 12 – Energy management domain summary.....	41
Table 13 – Lighting domain summary	42
Table 14 – Utility domain summary.....	42
Table 15 – HVAC domain summary	45
Table 16 – Convenience domain summary	46
Table 17 – User interface domain summary.....	46
Table 18 – Audio and video interface domain summary.....	47
Table 19 – Telecommunications domain summary	47
Table 20 – Security domain summary.....	48
Table 21 – Appliance domain summary	48
Table 22 – Common user interface domain summary.....	49
Table 23 – Safety cluster domain summary	49
Table 24 – Electric vehicle domain summary	50
Table 25 – General domain summary	50
Table 26 – Key operations and their parameters.....	51
Table 27 – Basic conditioning	52
Table 28 – Basic adjustment.....	52
Table 29 – Inputs table	53
Table 30 – Outputs table.....	54
Table 31 – addressingTable components.....	55
Table 32 – Object address	55
Table 33 – bindingMap configurationData (memoryType = 'pr')	55
Table 34 – Binding map operation table and addressing table.....	57
Table 35 – Services	61
Table 36 – Object address	62
Table 37 – identification configurationData (memoryType = 'pr')	62
Table 38 – Object address	62
Table 39 – discovery operationData (memoryType = 'op').....	63
Table 40 – Object address	63
Table 41 – centralOperations Data (memoryType = 'ro')	64
Table 42 – centralOperations operationData (memoryType = 'op')	64
Table 43 – centralOperations Data (memoryType = 'sp').....	64
Table 44 – centralOperations metaData (memoryType = 'po')	65
Table 45 – Object address	66
Table 46 – Pre-market realTime configurationData (memoryType = 'ro').....	67
Table 47 – Post-Market realTime configurationData (memoryType = 'po')	68
Table 48 – realTime interactiveData (memoryType = 'ra')	68
Table 49 – Object address	68
Table 50 – Pre-Market localTimeZone configurationData (memoryType = 'pr').....	69
Table 51 – Post-Market localTimeZone configurationData (memoryType = 'po')	70
Table 52 – localTimeZone interactiveData (memoryType = 'ra')	70

Table 53 – Object address	71
Table 54 – Pre-Market sourceOfTime configurationData (memoryType = 'pr').....	71
Table 55 – Post-Market sourceOfTime configurationData (memoryType = 'po')	72
Table 56 – sourceOfTime interactiveData (memoryType = 'ra')	72
Table 57 – Object address	73
Table 58 – authClass configurationData (memoryType = 'pr').....	73
Table 59 – Object address	74
Table 60 – Post-Market authClass configurationData (memoryType = 'sp').....	74
Table 61 – Object address	74
Table 62 – Post-Market authIdentity configurationData (memoryType = 'sp').....	75
Table 63 – Object address	75
Table 64 – Post-Market credentials configurationData (memoryType = 'sp')	75
Table 65 – Object address	76
Table 66 – Post-Market permissionGroup configurationData (memoryType = 'sp').....	76
Table 67 – Object address	76
Table 68 – Post-Market permissionService configurationData (memoryType = 'sp').....	77
Table 69 – Authorization and authentication service	78
Table 70 – Object address	80
Table 71 – crypto configurationData (memoryType = 'pr')	80
Table 72 – Object address	81
Table 73 – Post-Market crypto configurationData (memoryType = 'sp').....	81
Table 74 – Object address	84
Table 75 – Pre-Market discovery configurationData (memoryType = 'pr')	84
Table 76 – Post-Market discovery configurationData (memoryType = 'po')	84
Table 77 – Discovery interactiveData (memoryType = 'ra').....	84
Table 78 – Object address	85
Table 79 – Pre-Market centralOperations configurationData (memoryType = 'pr').....	85
Table 80 – Post-Market centralOperations configurationData (memoryType = 'po').....	85
Table 81 – centralOperations interactiveData (memoryType = 'ra').....	85
Table 82 – Object address	86
Table 83 – Pre-Market attachedNetwork configurationData (memoryType = 'pr')	86
Table 84 – Post-Market attachedNetwork configurationData (memoryType = 'po')	87
Table 85 – attachedNetwork interactiveData (memoryType = 'ra')	87
Table 86 – Object address	87
Table 87 – Pre-Market attachedNetwork configurationData (memoryType = 'pr')	87
Table 88 – Post-Market attachedNetwork configurationData (memoryType = 'po')	88
Table 89 – attachedNetwork interactiveData (memoryType = 'ra')	88
Table 90 – Object address	88
Table 91 – Post-Market privacySecuritySafety configurationData (memoryType = 'po').....	89
Table 92 – privacySecuritySafety serviceData (memoryType = 'op').....	90
Table 93 – Translation between ISO/IEC 14543-4-302 and HES gateway ISO/IEC 18012-3 lexicon (partial list).....	93
Table 94 – Object address	94

Table 95 – discovery configurationData (memoryType = 'ro')	94
Table 96 – discovery Data (memoryType = 'op')	95
Table 97 – Object address	95
Table 98 – centralOperations configurationData (memoryType = 'db')	95
Table 99 – centralOperations configurationData (memoryType = 'ro')	95
Table 100 – centralOperations operationData (memoryType = 'op')	96
Table 101 – Object address	96
Table 102 – attachedNetwork configurationData (memoryType = 'ro')	97
Table 103 – attachedNetwork configurationData (memoryType = 'db')	97
Table 104 – Object address	97
Table 105 – privacySecuritySafetyTraffic configurationData (memoryType = 'ro')	98
Table 106 – privacySecuritySafetyTraffic configurationData (memoryType = 'db')	98
Table 107 – Object address	99
Table 108 – requirement configurationData (memoryType = 'pr')	99
Table 109 – Object address	99
Table 110 – channel configurationData (memoryType = 'db')	100
Table 111 – channel configurationData (memoryType = 'ro')	100
Table 112 – Object address	101
Table 113 – privacySecuritySafetyTrafficTable configurationData (memoryType = 'ro')	101
Table 114 – privacySecuritySafetyTrafficTable operationData (memoryType = 'op')	102
Table 115 – Channel Tables	103
Table 116 – Pre-Market currentValue metaData	104
Table 117 – Post-Market currentValue metaData	105
Table 118 – Pre-Market compareValue metaData	107
Table 119 – Post-Market compareValue metaData	107
Table 120 – Remote object domains	107
Table 121 – Environment domain summary	108
Table 122 – Common area domain summary	109
Table 123 – Indirect GHG domain summary	110
Table A.1 – Key operations and parameters	117
Table A.2 – Basic conditioning	117
Table A.3 – Basic adjustment	118
Table A.4 – Straight through	118
Table A.5 – Increase value	118
Table A.6 – Increment	118
Table A.7 – Subtract	118
Table A.8 – Toggle	119
Table A.9 – Greater than	119
Table A.10 – Less than	119
Table A.11 – Inputs table	123
Table A.12 – Outputs table	124
Table A.13 – addressingTable components	125
Table F.1 – Power bus group components	147

Table F.2 – Energy management domain summary	148
Table F.3 – Object address	148
Table F.4 – Pre-Market currentValue metaData (memoryType = 'pr').....	149
Table F.5 – Post-Market currentValue metaData (memoryType = 'po')	150
Table F.6 – currentValue interactiveData (memoryType = 'po')	151
Table F.7 – Lighting domain summary	151
Table F.8 – Object address	152
Table F.9 – Pre-Market currentValue metaData (memoryType = 'pr').....	152
Table F.10 – Post-Market currentValue metaData (memoryType = 'po')	153
Table F.11 – currentValue interactiveData (memoryType = 'ra')	154
Table F.12 – Object address	154
Table F.13 – Pre-Market currentValue metaData (memoryType = 'pr').....	155
Table F.14 – Post-Market currentValue metaData (memoryType = 'po')	156
Table F.15 – currentValue interactiveData (memoryType = 'ra')	156
Table F.16 – Object address	157
Table F.17 – Pre-Market currentValue metaData (memoryType = 'pr').....	157
Table F.18 – Post-Market currentValue metaData (memoryType = 'po')	158
Table F.19 – currentValue interactiveData (memoryType = 'ra')	159
Table F.20 – Object address	159
Table F.21 – Pre-Market currentValue metaData (memoryType = 'pr').....	159
Table F.22 – Post-Market currentValue metaData (memoryType = 'po')	160
Table F.23 – currentValue interactiveData (memoryType = 'ra')	161
Table F.24 – Utility domain summary.....	162
Table F.25 – Object address	164
Table F.26 – Pre-Market currentValue metaData (memoryType = 'pr').....	165
Table F.27 – Post-Market currentValue metaData (memoryType = 'po')	166
Table F.28 – currentValue interactiveData (memoryType = 'ra')	166
Table F.29 – Object address	167
Table F.30 – Pre-Market currentValue metaData (memoryType = 'pr').....	168
Table F.31 – Post-Market currentValue metaData (memoryType = 'po')	169
Table F.32 – currentValue interactiveData (memoryType = 'ra')	169
Table F.33 – Object address	170
Table F.34 – Pre-Market currentValue metaData (memoryType = 'pr').....	171
Table F.35 – Post-Market currentValue metaData (memoryType = 'po')	172
Table F.36 – currentValue interactiveData (memoryType = 'ra')	172
Table F.37 – Object address	173
Table F.38 – Pre-Market currentValue metaData (memoryType = 'pr').....	174
Table F.39 – Post-Market currentValue metaData (memoryType = 'po')	175
Table F.40 – currentValue interactiveData (memoryType = 'ra')	175
Table F.41 – Object address	176
Table F.42 – Pre-Market currentValue metaData (memoryType = 'pr').....	177
Table F.43 – Post-Market currentValue metaData (memoryType = 'po')	178
Table F.44 – currentValue interactiveData (memoryType = 'ra')	178

Table F.45 – Object address	179
Table F.46 – Pre-Market currentValue metaData (memoryType = 'pr').....	180
Table F.47 – Post-Market currentValue metaData (memoryType = 'po')	181
Table F.48 – currentValue interactiveData (memoryType = 'ra')	181
Table F.49 – Object address	182
Table F.50 – Pre-Market currentValue metaData (memoryType = 'pr').....	183
Table F.51 – Post-Market currentValue metaData (memoryType = 'po')	184
Table F.52 – currentValue interactiveData (memoryType = 'ra')	184
Table F.53 – Object address	185
Table F.54 – Pre-Market compareValue metaData (memoryType = 'pr')	186
Table F.55 – Post-Market compareValue metaData (memoryType = 'po')	187
Table F.56 – currentValue interactiveData (memoryType = 'ra')	188
Table F.57 – Object address	189
Table F.58 – Pre-Market currentValue metaData (memoryType = 'pr').....	190
Table F.59– Post-Market currentValue metaData (memoryType = 'po')	191
Table F.60– currentValue interactiveData (memoryType = 'ra')	191
Table F.61 – Object address	192
Table F.62 – Pre-Market currentValue metaData (memoryType = 'pr').....	193
Table F.63 – Post-Market currentValue metaData (memoryType = 'po')	194
Table F.64 – currentValue interactiveData (memoryType = 'ra')	194
Table F.65 – Object address	195
Table F.66 – Pre-Market currentValue metaData (memoryType = 'pr').....	196
Table F.67 – Post-Market currentValue metaData (memoryType = 'po')	197
Table F.68 – currentValue interactiveData (memoryType = 'ra')	197
Table F.69 – Object address	198
Table F.70 – Pre-Market currentValue metaData (memoryType = 'pr').....	199
Table F.71 – Post-Market currentValue metaData (memoryType = 'po')	200
Table F.72 – currentValue interactiveData (memoryType = 'ra')	200
Table F.73 – Object address	201
Table F.74 – Pre-Market currentValue metaData (memoryType = 'pr').....	202
Table F.75 – Post-Market currentValue metaData (memoryType = 'po')	203
Table F.76 – currentValue interactiveData (memoryType = 'ra')	203
Table F.77 – Object address	204
Table F.78 – Pre-Market currentValue metaData (memoryType = 'pr').....	205
Table F.79 – Post-Market currentValue metaData (memoryType = 'po')	206
Table F.80 – currentValue interactiveData (memoryType = 'ra')	206
Table F.81 – Object address	207
Table F.82 – Pre-Market currentValue metaData (memoryType = 'pr').....	208
Table F.83 – Post-Market currentValue metaData (memoryType = 'po')	209
Table F.84 – currentValue interactiveData (memoryType = 'ra')	209
Table F.85 – Object address	210
Table F.86 – Pre-Market currentValue metaData (memoryType = 'pr').....	211
Table F.87 – Post-Market currentValue metaData (memoryType = 'po')	212

Table F.88 – currentValue interactiveData (memoryType = 'ra')	212
Table F.89 – Object address	213
Table F.90 – Pre-Market currentValue metaData (memoryType = 'pr').....	214
Table F.91 – Post-Market currentValue metaData (memoryType = 'po')	215
Table F.92 – currentValue interactiveData (memoryType = 'ra')	215
Table F.93 – User interface domain summary.....	216
Table F.94 – Object address	217
Table F.95 – Pre-Market currentValue metaData (memoryType = 'pr').....	217
Table F.96 – Post-Market currentValue metaData (memoryType = 'po')	218
Table F.97 – currentValue interactiveData (memoryType = 'ra')	219
Table F.98 – Object address	221
Table F.99 – Pre-Market currentValue metaData (memoryType = 'pr').....	221
Table F.100 – Post-Market currentValue metaData (memoryType = 'po').....	222
Table F.101 – currentValue interactiveData (memoryType = 'ra')	223
Table F.102 – Object address	223
Table F.103 – Pre-Market currentValue metaData (memoryType = 'pr').....	223
Table F.104 – Post-Market currentValue metaData (memoryType = 'po').....	224
Table F.105 – currentValue interactiveData (memoryType = 'ra')	225
Table F.106 – Object address	225
Table F.107 – Pre-Market currentValue metaData (memoryType = 'pr').....	226
Table F.108 – Post-Market currentValue metaData (memoryType = 'po').....	227
Table F.109 – currentValue interactiveData (memoryType = 'ra')	227