

ISO 13209-4:2024-11 (E)

Road vehicles - Open Test sequence eXchange format (OTX) - Part 4: Expanded extensions interface definition

Contents		Page
Foreword		xiii
Introduction		xv
1 Scope		1
2 Normative references		1
3 Terms, definitions and abbreviated terms		1
3.1 Terms and definitions.....		1
3.2 Abbreviated terms.....		2
4 Requirements		2
4.1 Basic principles for requirements definition.....		2
4.2 Requirement listing.....		2
4.2.1 Assertion requirements.....		2
4.2.2 BlackBox requirements.....		2
4.2.3 BusMonitoring requirements.....		3
4.2.4 ComInterface requirements.....		3
4.2.5 CommonDialogs requirements.....		3
4.2.6 DataType requirements.....		4
4.2.7 DiagComPlus requirements.....		4
4.2.8 DiagConfiguration requirements.....		5
4.2.9 DiagDataBrowsingPlus requirements.....		5
4.2.10 ECUConfiguration requirements.....		6
4.2.11 EcuStateChart requirements.....		7
4.2.12 EventPlus requirements.....		7
4.2.13 ExternalServiceProvider requirements.....		7
4.2.14 File requirements.....		7
4.2.15 FlashPlus requirements.....		8
4.2.16 Persistence requirements.....		8
4.2.17 Range requirements.....		8
4.2.18 SQL requirements.....		9
4.2.19 StateMachineProcedure requirements.....		9
4.2.20 StateVariable requirements.....		9
4.2.21 TestResultHandling requirements.....		10
4.2.22 Util requirements.....		10
4.2.23 VehicleInfo requirements.....		11
4.2.24 XML requirements.....		11
4.2.25 ZipHandling requirements.....		13
5 Extension overview		13
5.1 General.....		13
5.2 Dependencies.....		14
5.3 OTX packaging (PTX).....		19
6 OTX Assertion extension		19
6.1 Assertion – General.....		19
6.2 Assertion – Exceptions.....		19
6.2.1 Exceptions overview.....		19
6.2.2 Exceptions syntax.....		19
6.2.3 Exceptions semantics.....		20
6.3 Assertion – Actions.....		20
6.3.1 Actions overview.....		20

	6.3.2	Actions syntax.....	20
	6.3.3	Actions general semantics.....	21
7		OTX BlackBox extension.....	21
	7.1	BlackBox – General.....	21
	7.2	BlackBox – Datatypes.....	21
	7.2.1	Datatypes overview.....	21
	7.2.2	Datatypes syntax.....	21
	7.2.3	Datatypes semantics.....	22
	7.3	BlackBox – Variable access.....	22
	7.3.1	Variable access overview.....	22
	7.3.2	Variable access syntax.....	22
	7.3.3	Variable access semantics.....	23
	7.4	BlackBox – Terms.....	23
	7.4.1	Terms overview.....	23
	7.4.2	Terms syntax.....	23
	7.4.3	Terms general semantics.....	24
8		OTX BusMonitoring extension.....	25
	8.1	BusMonitoring – General.....	25
	8.2	BusMonitoring – Datatypes.....	25
	8.2.1	Datatypes overview.....	25
	8.2.2	Datatypes syntax.....	25
	8.2.3	Datatypes semantics.....	26
	8.3	BusMonitoring – Enumerations.....	27
	8.3.1	Enumerations syntax.....	27
	8.3.2	Enumerations semantics.....	27
	8.4	BusMonitoring – Exceptions.....	27
	8.4.1	Exceptions overview.....	27
	8.4.2	Exceptions syntax.....	28
	8.4.3	Exceptions semantics.....	28
	8.5	BusMonitoring – Variable access.....	29
	8.5.1	Variable access overview.....	29
	8.5.2	Variable access syntax.....	29
	8.5.3	Variable access semantics.....	29
	8.6	BusMonitoring – Actions.....	29
	8.6.1	Actions overview.....	29
	8.6.2	Actions syntax.....	29
	8.6.3	Actions general semantics.....	30
	8.7	BusMonitoring – Terms.....	31
	8.7.1	Terms overview.....	31
	8.7.2	Terms syntax.....	32
	8.7.3	Terms general semantics.....	32
9		OTX ComInterface extension.....	38
	9.1	ComInterface – General.....	38
	9.2	ComInterface – Datatypes.....	38
	9.2.1	Datatypes overview.....	38
	9.2.2	Datatypes syntax.....	38
	9.2.3	Datatypes semantics.....	39
	9.3	ComInterface – Enumerations.....	39
	9.3.1	Enumerations syntax.....	39
	9.3.2	Enumerations semantics.....	40
	9.4	ComInterface – Exceptions.....	40
	9.4.1	Exceptions overview.....	40
	9.4.2	Exceptions syntax.....	40
	9.4.3	Exceptions semantics.....	41
	9.5	ComInterface – Variable access.....	42
	9.5.1	Variable access overview.....	42
	9.5.2	Variable access syntax.....	42
	9.5.3	Variable access semantics.....	43
	9.6	ComInterface – Actions.....	43
	9.6.1	Actions overview.....	43
	9.6.2	Actions syntax.....	43
	9.6.3	Actions general semantics.....	44
	9.7	ComInterface – Terms.....	48

9.7.1	Terms overview.....	48
9.7.2	Terms syntax.....	48
9.7.3	Semantics for ComInterface terms.....	49
9.7.4	Semantics for Enumeration terms.....	58
9.7.5	Terms general semantics.....	59
10	OTX CommonDialogs extension.....	59
10.1	CommonDialogs – General.....	59
10.2	CommonDialogs – Exceptions.....	60
10.2.1	Exceptions overview.....	60
10.2.2	Exceptions syntax.....	60
10.2.3	Exceptions semantics.....	60
10.3	CommonDialogs – Actions.....	60
10.3.1	Actions overview.....	60
10.3.2	Actions syntax.....	60
10.3.3	Actions general semantics.....	61
11	OTX DataType extension.....	64
11.1	DataType – General.....	64
11.2	DataType – Datatypes.....	64
11.2.1	Datatypes overview.....	64
11.2.2	Datatypes syntax.....	64
11.2.3	Datatypes semantics.....	65
11.3	DataType – Exceptions.....	68
11.3.1	Exceptions overview.....	68
11.3.2	Exceptions syntax.....	68
11.3.3	Exceptions semantics.....	68
11.4	DataType – Variable access.....	69
11.4.1	Variable access overview.....	69
11.4.2	Variable access syntax.....	69
11.4.3	Variable access semantics.....	69
11.5	DataType – Declaration and arguments.....	70
11.5.1	Declaration and arguments syntax.....	70
11.5.2	Declaration and arguments semantics.....	70
11.6	DataType – Signatures.....	70
11.6.1	Signatures overview.....	70
11.6.2	Signatures syntax.....	71
11.6.3	Semantics for Enumerations.....	71
11.6.4	Semantics for Structures.....	72
11.7	DataType – Terms.....	73
11.7.1	Terms overview.....	73
11.7.2	Semantics for Enumeration terms.....	73
11.7.3	Semantics for ResourceLocation terms.....	77
11.7.4	Semantics for Structure terms.....	81
12	OTX DiagComPlus extension.....	85
12.1	DiagComPlus – General.....	85
12.2	DiagComPlus – Datatypes.....	85
12.2.1	Datatypes overview.....	85
12.2.2	Datatypes syntax.....	85
12.2.3	Datatypes semantics.....	86
12.3	DiagComPlus – Enumerations.....	87
12.3.1	Enumerations syntax.....	87
12.3.2	Enumerations semantics.....	87
12.4	DiagComPlus – Exceptions.....	88
12.4.1	Exceptions overview.....	88
12.4.2	Exceptions syntax.....	88
12.4.3	Exceptions semantics.....	88
12.5	DiagComPlus – Variable access.....	88
12.5.1	Variable access overview.....	88

	12.5.2	Variable access syntax.....	88
	12.5.3	Variable access semantics.....	89
12.6		DiagComPlus – Actions.....	89
	12.6.1	Actions overview.....	89
	12.6.2	Actions syntax.....	89
	12.6.3	Actions general semantics.....	90
12.7		DiagComPlus – Terms.....	93
	12.7.1	Terms overview.....	93
	12.7.2	Terms syntax.....	93
	12.7.3	Terms general semantics.....	94
13		OTX DiagConfiguration extension.....	99
	13.1	DiagConfiguration – General.....	99
	13.2	DiagConfiguration – Exceptions.....	99
	13.2.1	Exceptions overview.....	99
	13.2.2	Exceptions syntax.....	99
	13.2.3	Exceptions semantics.....	100
	13.3	DiagConfiguration – Actions.....	100
	13.3.1	Actions overview.....	100
	13.3.2	Actions syntax.....	100
	13.3.3	Actions general semantics.....	100
	13.4	DiagConfiguration – Terms.....	101
	13.4.1	Terms overview.....	101
	13.4.2	Terms syntax.....	102
	13.4.3	Terms general semantics.....	102
14		OTX DiagDataBrowsingPlus extension.....	104
	14.1	DiagDataBrowsingPlus – General.....	104
	14.2	DiagDataBrowsingPlus – Datatypes.....	104
	14.2.1	Datatypes overview.....	104
	14.2.2	Datatypes syntax.....	104
	14.2.3	Datatypes semantics.....	105
	14.3	DiagDataBrowsingPlus – Enumerations.....	109
	14.3.1	Enumerations syntax.....	109
	14.3.2	Enumerations semantics.....	110
	14.4	DiagDataBrowsingPlus – Exceptions.....	113
	14.4.1	Exceptions overview.....	113
	14.4.2	Exceptions syntax.....	113
	14.4.3	Exceptions semantics.....	114
	14.5	DiagDataBrowsingPlus – Variable access.....	115
	14.5.1	Variable access overview.....	115
	14.5.2	Variable access syntax.....	115
	14.5.3	Variable access semantics.....	115
	14.6	DiagDataBrowsingPlus – Terms.....	116
	14.6.1	Terms overview.....	116
	14.6.2	Semantics for DbComChannel terms.....	116
	14.6.3	Semantics for DbDiagService terms.....	118
	14.6.4	Semantics for DbDiagTroubleCode terms.....	124
	14.6.5	Semantics for DbEcuVariant terms.....	128
	14.6.6	Semantics for DbEnvDataDesc terms.....	129
	14.6.7	Semantics for DbFaultMemory terms.....	132
	14.6.8	Semantics for DbMatchingParameter terms.....	134
	14.6.9	Semantics for DbObject terms.....	135
	14.6.10	Semantics for DbParameter terms.....	139
	14.6.11	Semantics for DbRequest terms.....	153
	14.6.12	Semantics for DbResponse terms.....	157
	14.6.13	Semantics for DbSpecialDataElement terms.....	161
	14.6.14	Semantics for DbSpecialDataGroup terms.....	163
	14.6.15	Semantics for DbSubComponent terms.....	167
	14.6.16	Semantics for DbTable terms.....	172

	14.6.17 Semantics for Interval terms.....	177
	14.6.18 Semantics for McdDataType terms.....	180
	14.6.19 Semantics for McdParameterType terms.....	181
	14.6.20 Semantics for McdResponseType terms.....	183
	14.6.21 Semantics for Parameter terms.....	185
	14.6.22 Semantics for TextTableElement terms.....	188
15	OTX EcuConfiguration extension.....	191
15.1	EcuConfiguration – General.....	191
15.2	EcuConfiguration – Datatypes.....	191
	15.2.1 Datatypes overview.....	191
	15.2.2 Datatypes syntax.....	192
	15.2.3 Datatypes semantics.....	192
15.3	EcuConfiguration – Exceptions.....	193
	15.3.1 Exceptions overview.....	193
	15.3.2 Exceptions syntax.....	193
	15.3.3 Exceptions semantics.....	193
15.4	EcuConfiguration – Variable access.....	194
	15.4.1 Variable access overview.....	194
	15.4.2 Variable access syntax.....	194
	15.4.3 Variable access semantics.....	195
15.5	EcuConfiguration – Actions.....	196
	15.5.1 Actions overview.....	196
	15.5.2 Actions syntax.....	196
	15.5.3 Semantics for ConfigurationRecord actions.....	197
	15.5.4 Semantics for ConfigurationRecords actions.....	197
	15.5.5 Semantics for OptionItem actions.....	200
15.6	EcuConfiguration – Terms.....	200
	15.6.1 Terms overview.....	200
	15.6.2 Semantics for ConfigurationRecord terms.....	200
	15.6.3 Semantics for ConfigurationRecords terms.....	204
	15.6.4 Semantics for DbConfigurationData terms.....	205
	15.6.5 Semantics for DbConfigurationRecord terms.....	207
	15.6.6 Semantics for DbDataRecord terms.....	210
	15.6.7 Semantics for DbItemValue terms.....	213
	15.6.8 Semantics for DbOptionItem terms.....	216
	15.6.9 Semantics for OptionItem terms.....	223
16	OTX EcuStateChart extension.....	228
16.1	EcuStateChart – General.....	228
16.2	EcuStateChart – Datatypes.....	228
	16.2.1 Datatypes overview.....	228
	16.2.2 Datatypes syntax.....	228
	16.2.3 Datatypes semantics.....	228
16.3	EcuStateChart – Exceptions.....	229
	16.3.1 Exceptions overview.....	229
	16.3.2 Exceptions syntax.....	229
	16.3.3 Exceptions semantics.....	230
16.4	EcuStateChart – Variable access.....	230
	16.4.1 Variable access overview.....	230
	16.4.2 Variable access syntax.....	230
	16.4.3 Variable access semantics.....	230
16.5	EcuStateChart – Terms.....	230
	16.5.1 Terms overview.....	230
	16.5.2 Semantics for DbEcuState terms.....	231
	16.5.3 Semantics for ListTerm related terms.....	233
	16.5.4 Semantics for SimpleTerm related terms.....	238
	16.5.5 Terms general semantics.....	241
17	OTX EventPlus extension.....	245

17.1	EventPlus – General.....	245
17.2	EventPlus – Exceptions.....	246
	17.2.1 Exceptions overview.....	246
	17.2.2 Exceptions syntax.....	246
	17.2.3 Exceptions semantics.....	246
17.3	EventPlus – Terms.....	247
	17.3.1 Terms overview.....	247
	17.3.2 Terms syntax.....	247
	17.3.3 Terms general semantics.....	247
18	OTX ExternalServiceProvider extension.....	248
18.1	ExternalServiceProvider – General.....	248
18.2	ExternalServiceProvider – Datatypes.....	249
	18.2.1 Datatypes overview.....	249
	18.2.2 Datatypes syntax.....	249
	18.2.3 Datatypes semantics.....	249
18.3	ExternalServiceProvider – Enumerations.....	250
	18.3.1 Enumerations syntax.....	250
	18.3.2 Enumerations semantics.....	251
18.4	ExternalServiceProvider – Exceptions.....	251
	18.4.1 Exceptions overview.....	251
	18.4.2 Exceptions syntax.....	251
	18.4.3 Exceptions semantics.....	252
18.5	ExternalServiceProvider – Variable access.....	253
	18.5.1 Variable access overview.....	253
	18.5.2 Variable access syntax.....	253
	18.5.3 Variable access semantics.....	253
18.6	ExternalServiceProvider – Declaration and arguments.....	254
	18.6.1 Declaration and arguments syntax.....	254
	18.6.2 Declaration and arguments semantics.....	255
18.7	ExternalServiceProvider – Signatures.....	255
	18.7.1 Signatures overview.....	255
	18.7.2 Signatures syntax.....	255
	18.7.3 Signatures general semantics.....	256
18.8	ExternalServiceProvider – Actions.....	262
	18.8.1 Actions overview.....	262
	18.8.2 Actions syntax.....	262
	18.8.3 Actions general semantics.....	264
18.9	ExternalServiceProvider – Terms.....	270
	18.9.1 Terms overview.....	270
	18.9.2 Terms syntax.....	270
	18.9.3 Semantics for Enumeration terms.....	271
	18.9.4 Semantics for External Service provider event query terms.....	273
	18.9.5 Semantics for External service provider event source terms.....	274
	18.9.6 Terms general semantics.....	276
19	OTX File extension.....	279
19.1	File – General.....	279
19.2	File – Datatypes.....	279
	19.2.1 Datatypes overview.....	279
	19.2.2 Datatypes syntax.....	279
	19.2.3 Datatypes semantics.....	280
19.3	File – Exceptions.....	281
	19.3.1 Exceptions overview.....	281
	19.3.2 Exceptions syntax.....	281
	19.3.3 Exceptions semantics.....	282
19.4	File – Variable access.....	282
	19.4.1 Variable access overview.....	282
	19.4.2 Variable access syntax.....	282
	19.4.3 Variable access semantics.....	283

19.5	File – Actions	283
19.5.1	Actions overview	283
19.5.2	Actions syntax	283
19.5.3	Actions general semantics	285
19.6	File – Terms	288
19.6.1	Terms overview	288
19.6.2	Terms syntax	288
19.6.3	Terms general semantics	289
20	OTX FlashPlus extension	299
20.1	FlashPlus – General	299
20.2	FlashPlus – Exceptions	299
20.2.1	Exceptions overview	299
20.2.2	Exceptions syntax	299
20.2.3	Exceptions semantics	300
20.3	FlashPlus – Actions	300
20.3.1	Actions overview	300
20.3.2	Actions syntax	300
20.3.3	Actions general semantics	301
20.4	FlashPlus – Terms	302
20.4.1	Terms overview	302
20.4.2	Terms syntax	302
20.4.3	Terms general semantics	303
21	OTX Persistence extension	305
21.1	Persistence – General	305
21.2	Persistence – Exceptions	306
21.2.1	Exceptions overview	306
21.2.2	Exceptions syntax	306
21.2.3	Exceptions semantics	306
21.3	Persistence – Actions	307
21.3.1	Actions overview	307
21.3.2	Actions syntax	307
21.3.3	Actions general semantics	307
22	OTX Range extension	308
22.1	Range – General	308
22.2	Range – Datatypes	308
22.2.1	Datatypes overview	308
22.2.2	Datatypes syntax	309
22.2.3	Datatypes semantics	309
22.3	Range – Enumerations	314
22.3.1	Enumerations syntax	314
22.3.2	Enumerations semantics	314
22.4	Range – Exceptions	314
22.4.1	Exceptions overview	314
22.4.2	Exceptions syntax	315
22.4.3	Exceptions semantics	315
22.5	Range – Variable access	315
22.5.1	Variable access overview	315
22.5.2	Variable access syntax	315
22.5.3	Variable access semantics	316
22.6	Range – Actions	316
22.6.1	Actions overview	316
22.6.2	Actions syntax	316
22.6.3	Actions general semantics	317
22.7	Range – Terms	319
22.7.1	Terms overview	319
22.7.2	Terms syntax	319
22.7.3	Semantics for general terms	319

	22.7.4	Semantics for Interval terms.....	328
	22.7.5	Semantics for IntervalSemantic terms.....	338
	22.7.6	Semantics for Ranged terms.....	340
23		OTX SQL extension.....	346
	23.1	SQL – General.....	346
	23.2	SQL – Datatypes.....	347
	23.2.1	Datatypes overview.....	347
	23.2.2	Datatypes syntax.....	347
	23.2.3	Datatypes semantics.....	347
	23.3	SQL – Exceptions.....	348
	23.3.1	Exceptions overview.....	348
	23.3.2	Exceptions syntax.....	348
	23.3.3	Exceptions semantics.....	348
	23.4	SQL – Variable access.....	349
	23.4.1	Variable access overview.....	349
	23.4.2	Variable access syntax.....	349
	23.4.3	Variable access semantics.....	349
	23.5	SQL – Actions.....	349
	23.5.1	Actions overview.....	349
	23.5.2	Actions syntax.....	350
	23.5.3	Actions general semantics.....	350
	23.6	SQL – Terms.....	352
	23.6.1	Terms overview.....	352
	23.6.2	Terms syntax.....	352
	23.6.3	Terms general semantics.....	353
24		OTX StateMachineProcedure extension.....	359
	24.1	StateMachineProcedure – General.....	359
	24.2	StateMachineProcedure – Datatypes.....	361
	24.2.1	Datatypes overview.....	361
	24.2.2	Datatypes syntax.....	361
	24.2.3	Datatypes semantics.....	362
	24.3	StateMachineProcedure – Procedures.....	364
	24.3.1	Procedures overview.....	364
	24.3.2	Procedures syntax.....	364
	24.3.3	Procedures general semantics.....	365
25		OTX StateVariable extension.....	368
	25.1	StateVariable – General.....	368
	25.2	StateVariable – Declaration and arguments.....	368
	25.2.1	Declaration and arguments syntax.....	368
	25.2.2	Declaration and arguments semantics.....	369
26		OTX TestResultHandling extension.....	369
	26.1	TestResultHandling – General.....	369
	26.2	TestResultHandling – Datatypes.....	370
	26.2.1	Datatypes overview.....	370
	26.2.2	Datatypes syntax.....	370
	26.2.3	Datatypes semantics.....	371
	26.3	TestResultHandling – Enumerations.....	373
	26.3.1	Enumerations syntax.....	373
	26.3.2	Enumerations semantics.....	374
	26.4	TestResultHandling – Exceptions.....	375
	26.4.1	Exceptions overview.....	375
	26.4.2	Exceptions syntax.....	375
	26.4.3	Exceptions semantics.....	375
	26.5	TestResultHandling – Variable access.....	376
	26.5.1	Variable access overview.....	376
	26.5.2	Variable access syntax.....	376
	26.5.3	Variable access semantics.....	377

26.6	TestResultHandling – Declaration and arguments.....	377
	26.6.1 Declaration and arguments syntax.....	377
	26.6.2 Declaration and arguments semantics.....	378
26.7	TestResultHandling – Actions.....	378
	26.7.1 Actions overview.....	378
	26.7.2 Actions syntax.....	378
	26.7.3 Actions general semantics.....	380
26.8	TestResultHandling – Terms.....	388
	26.8.1 Terms overview.....	388
	26.8.2 Terms syntax.....	388
	26.8.3 Semantics for Enumeration terms.....	389
	26.8.4 Terms general semantics.....	392
27	OTX Util extension.....	395
27.1	Util – General.....	395
27.2	Util – Exceptions.....	395
	27.2.1 Exceptions overview.....	395
	27.2.2 Exceptions syntax.....	395
	27.2.3 Exceptions semantics.....	396
27.3	Util – Terms.....	396
	27.3.1 Terms overview.....	396
	27.3.2 Terms syntax.....	397
	27.3.3 Semantics for Util terms.....	398
28	OTX VehicleInfo extension.....	405
28.1	VehicleInfo – General.....	405
28.2	VehicleInfo – Datatypes.....	405
	28.2.1 Datatypes overview.....	405
	28.2.2 Datatypes syntax.....	405
	28.2.3 Datatypes semantics.....	405
28.3	VehicleInfo – Enumerations.....	406
	28.3.1 Enumerations syntax.....	406
	28.3.2 Enumerations semantics.....	406
28.4	VehicleInfo – Exceptions.....	406
	28.4.1 Exceptions overview.....	406
	28.4.2 Exceptions syntax.....	406
	28.4.3 Exceptions semantics.....	407
28.5	VehicleInfo – Variable access.....	407
	28.5.1 Variable access overview.....	407
	28.5.2 Variable access syntax.....	408
	28.5.3 Variable access semantics.....	408
28.6	VehicleInfo – Terms.....	408
	28.6.1 Terms overview.....	408
	28.6.2 Terms syntax.....	408
	28.6.3 Terms general semantics.....	409
29	OTX XML extension.....	411
29.1	XML – General.....	411
29.2	XML – Datatypes.....	412
	29.2.1 Datatypes overview.....	412
	29.2.2 Datatypes syntax.....	412
	29.2.3 Datatypes semantics.....	412
29.3	XML – Exceptions.....	412
	29.3.1 Exceptions overview.....	412
	29.3.2 Exceptions syntax.....	413
	29.3.3 Exceptions semantics.....	413
29.4	XML – Variable access.....	414
	29.4.1 Variable access overview.....	414
	29.4.2 Variable access syntax.....	414
	29.4.3 Variable access semantics.....	414

29.5	XML – Actions.....	414
29.5.1	Actions overview.....	414
29.5.2	Actions syntax.....	414
29.5.3	Actions general semantics.....	415
29.6	XML – Terms.....	421
29.6.1	Terms overview.....	421
29.6.2	Terms syntax.....	421
29.6.3	Terms general semantics.....	423
30	OTX ZipHandling extension.....	429
30.1	ZipHandling – General.....	429
30.2	ZipHandling – Exceptions.....	429
30.2.1	Exceptions overview.....	429
30.2.2	Exceptions syntax.....	429
30.2.3	Exceptions semantics.....	430
30.3	ZipHandling – Actions.....	431
30.3.1	Actions overview.....	431
30.3.2	Actions syntax.....	431
30.3.3	Actions general semantics.....	432
Annex A	(normative) Comprehensive checker rule listing.....	437
Annex B	(normative) PTX file.....	447
Annex C	(informative) diagValidationGroups.....	456
Bibliography	457