



# **MSR Engineering Documentation (MEDOC) Structure Principles of MSRNET.DTD**

**Scope: Automotive Networks**

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	Structure Principles of MSRNET.DTD MSRNET-EADOC  Abstract	Page: 2/220 Date: 2002-02-07 State: RD
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## Abstract

This is a reference document for *MSRSW DTD* describing all elements.  
*MSRNET DTD* is part of the MSR development documentation MEDOC.

## Table of Contents

	Table of Contents	3
	List of Figures	12
	List of Tables	20
	Introduction	28
1	<b>How to read this document</b>	<b>29</b>
2	<b>Allgemeine Projektdaten</b>	<b>31</b>
1	<b>ABS ... ADMIN-DATA</b>	<b>32</b>
1.1	ABS	32
1.2	ACCEPTANCE-COND	32
1.3	ADD-INFO	33
1.4	ADD-SPEC	34
1.5	ADDRESS	35
1.6	ADMIN-DATA	35
2	<b>BAUDRATE ... BYTE-ORDER</b>	<b>37</b>
2.1	BAUDRATE	37
2.2	BITSIZE	37
2.3	BTL-CYCLES	37
2.4	BYTE-ORDER	38
3	<b>C-CODE ... COMPANY-REVISION-INFOS</b>	<b>39</b>
3.1	C-CODE	39
3.2	CALC-NET-MESSAGE-IDENTIFIERS	39
3.3	CHANGE	39
3.4	CHAPTER	40
3.5	CITY	42
3.6	CMT-INT	42
3.7	CMT-PHYS	42
3.8	CMT-TEXT	43
3.9	CODE	43
3.10	CODED	44



3.11	CODED-MAX	44
3.12	CODED-MIN	45
3.13	COLSPEC	45
3.14	COMPANIES	46
3.15	COMPANY	47
3.16	COMPANY-DOC-INFO	49
3.17	COMPANY-DOC-INFOS	49
3.18	COMPANY-REF	50
3.19	COMPANY-REVISION-INFO	50
3.20	COMPANY-REVISION-INFOS	51
4	<b>COND ... CYCLE-TIME</b>	<b>53</b>
4.1	COND	53
4.2	CONNECTION-COMP-1	53
4.3	CONNECTION-COMP-CLASS	54
4.4	CONNECTION-COMP-PRMS	54
4.5	CONNECTION-COMP-REF	55
4.6	CONNECTION-COMP-SPEC-1	56
4.7	CONNECTION-COMPS-1	56
4.8	CYCLE-TIME	57
5	<b>DATE ... DRIVER-CONCEPT</b>	<b>58</b>
5.1	DATE	58
5.2	DATE-1	58
5.3	DEF	59
5.4	DEF-ITEM	59
5.5	DEF-LIST	59
5.6	DEMARICATION-OTHER-PROJECTS	60
5.7	DEPARTMENT	60
5.8	DESC	61
5.9	DIR-HAND-OVER-DOC-DATA	62
5.10	DLC	62
5.11	DOC-LABEL	62
5.12	DOC-REVISION	63
5.13	DOC-REVISIONS	63
5.14	DRAWING-NUMBER	64
5.15	DRIVER-CONCEPT	64
6	<b>E ... ERROR-VALUES</b>	<b>66</b>
6.1	E	66

	Structure Principles of MSRNET.DTD MSRNET-EADOC	Page: 5/220
	Chapter: Table of Contents	Date: 2002-02-07 State: RD

6.2	EMAIL	66
6.3	ENTITY-NAME	66
6.4	ENTRY	67
6.5	ERROR-VALUE	68
6.6	ERROR-VALUES	68
7	<b>FAX ... FT</b>	<b>70</b>
7.1	FAX	70
7.2	FIGURE	70
7.3	FILE	71
7.4	FORMULA	71
7.5	FT	72
8	<b>GENERAL-NET-SPEC ... GRAPHIC</b>	<b>73</b>
8.1	GENERAL-NET-SPEC	73
8.2	GENERAL-PROJECT-DATA	73
8.3	GENERIC-MATH	74
8.4	GRAPHIC	75
9	<b>HOMEPAGE ... HOMEPAGE</b>	<b>78</b>
9.1	HOMEPAGE	78
10	<b>IDENTIFIER ... ITEM-LABEL</b>	<b>79</b>
10.1	IDENTIFIER	79
10.2	IDENTIFIER-BASE-ADDRESS	79
10.3	IDENTIFIER-MASK	79
10.4	IDENTIFIER-TYPE	80
10.5	IE	80
10.6	INDENT-SAMPLE	81
10.7	INIT-VALUE	81
10.8	INTEGRATION-CAPABILITY	82
10.9	INTERFACE-CIRCUIT	82
10.10	INTRODUCTION	83
10.11	ITEM	85
10.12	ITEM-LABEL	85
11	<b>LABEL ... LONG-NAME-1</b>	<b>87</b>
11.1	LABEL	87
11.2	LABELED-ITEM	87
11.3	LABELED-LIST	88



11.4	LANGUAGE	89
11.5	LATENCY-TIME	90
11.6	LIST	90
11.7	LOCS	91
11.8	LONG-NAME	92
11.9	LONG-NAME-1	92
12	<b>MAX ... MULTIPLEXOR-VALUE</b>	<b>94</b>
12.1	MAX	94
12.2	MESSAGE-IDENTIFIER-OFFSET	94
12.3	MIN	94
12.4	MODIFICATION	95
12.5	MODIFICATIONS	96
12.6	MSRNET	96
12.7	MULTIPLEX-ENTRY	98
12.8	MULTIPLEX-SIGNAL-LIST	99
12.9	MULTIPLEX-SIGNAL-SET	99
12.10	MULTIPLEXOR	99
12.11	MULTIPLEXOR-VALUE	100
13	<b>NA ... NET-MESSAGE-IDENTIFIERS</b>	<b>101</b>
13.1	NA	101
13.2	NAMELOC	101
13.3	NCOI-1	102
13.4	NCOI-3	102
13.5	NET-ARCHITECTURE	103
13.6	NET-BLOCK-MODES	105
13.7	NET-DIAG-SPEC	105
13.8	NET-EMC-DESIGN	105
13.9	NET-ERROR-HANDLING	106
13.10	NET-INIT-SPEC	107
13.11	NET-INTERFACE-PRMS	107
13.12	NET-INTERFACE-SPEC	108
13.13	NET-LINE	110
13.14	NET-LINE-DESC	110
13.15	NET-LINE-SPEC	111
13.16	NET-LINES	111
13.17	NET-MESSAGE	112
13.18	NET-MESSAGE-DESC	113



13.19	NET-MESSAGE-IDENTIFIER	113
13.20	NET-MESSAGE-IDENTIFIERS	114
14	<b>NET-MESSAGE-LAYOUT ... NET-SIGNAL-CLASS</b>	<b>115</b>
14.1	NET-MESSAGE-LAYOUT	115
14.2	NET-MESSAGE-SET	115
14.3	NET-MESSAGE-SETS	116
14.4	NET-MESSAGE-SIGNAL	116
14.5	NET-MESSAGE-SIGNALS	117
14.6	NET-MESSAGE-SPEC	117
14.7	NET-MESSAGES	117
14.8	NET-MGMT-SPEC	118
14.9	NET-NODE	118
14.10	NET-NODE-PORT	119
14.11	NET-NODE-PORT-REF	119
14.12	NET-NODE-PORTS	120
14.13	NET-NODE-REF	120
14.14	NET-NODE-SPEC	121
14.15	NET-NODE-VARIANTS	121
14.16	NET-NODES	122
14.17	NET-OPER-SPEC	122
14.18	NET-PORT-REF	123
14.19	NET-SIGNAL	124
14.20	NET-SIGNAL-CLASS	124
15	<b>NET-SIGNAL-GROUP ... NUMBER</b>	<b>126</b>
15.1	NET-SIGNAL-GROUP	126
15.2	NET-SIGNAL-GROUPS	126
15.3	NET-SIGNAL-REF	126
15.4	NET-SIGNAL-SPEC	127
15.5	NET-SIGNAL-SPEC-VARIANT	128
15.6	NET-SIGNAL-SPEC-VARIANTS	128
15.7	NET-SIGNALS	129
15.8	NET-TOPOLOGY-SPEC	129
15.9	NMLIST	130
15.10	NODE-TYPE	131
15.11	NODE-VARIANT	131
15.12	NOTE	132
15.13	NUMBER	133



16	<b>OBJECTIVES ... OVERALL-PROJECT</b>	<b>134</b>
16.1	OBJECTIVES	134
16.2	OFFSET	134
16.3	OVERALL-PROJECT	134
17	<b>P ... PROJECT-DATA</b>	<b>136</b>
17.1	P	136
17.2	PARALLEL-DESIGNS	136
17.3	PART-NUMBER	137
17.4	PHASE-RELATIONS	137
17.5	PHONE	138
17.6	PHYS	138
17.7	PHYS-MAX	139
17.8	PHYS-MIN	139
17.9	POSITION	139
17.10	POWERDOWN-RECEIVE-TIME	140
17.11	POWERUP-RECEIVE-TIME	140
17.12	POWERUP-TRANSMIT-TIME	141
17.13	PRIVATE-CODE	141
17.14	PRIVATE-CODES	142
17.15	PRM	143
17.16	PRM-CHAR	143
17.17	PRMS	145
17.18	PROG-CODE	145
17.19	PROJECT	146
17.20	PROJECT-DATA	146
18	<b>PROJECT-SCHEDULE ... PURCHASING-COND</b>	<b>148</b>
18.1	PROJECT-SCHEDULE	148
18.2	PROTOCOL-CONFORMANCE	148
18.3	PROTOCOLS	148
18.4	PUBLISHER	149
18.5	PURCHASING-COND	149
19	<b>REASON ... ROW</b>	<b>151</b>
19.1	REASON	151
19.2	REASON-ORDER	151
19.3	RECEIVERS	152
19.4	REMARK	152

	Structure Principles of MSRNET.DTD MSRNET-EADOC	Page: 9/220
	Chapter: Table of Contents	Date: 2002-02-07 State: RD

19.5	REVISION-LABEL	153
19.6	ROLE	153
19.7	ROLES	154
19.8	ROW	154
20	<b>SAMPLE ... SJW</b>	<b>156</b>
20.1	SAMPLE	156
20.2	SAMPLE-POINT	156
20.3	SAMPLE-RATE	156
20.4	SAMPLE-REF	157
20.5	SAMPLE-SPEC	157
20.6	SAMPLES	158
20.7	SCHEDULE	158
20.8	SCHEMATIC-ELEMENT	159
20.9	SCHEMATIC-ELEMENTS	159
20.10	SEGMENT	160
20.11	SEGMENT-END-NODES	160
20.12	SEGMENT-LENGTH	161
20.13	SEGMENTATION-DESC	161
20.14	SEGMENTATION-SPEC	162
20.15	SEGMENTS	163
20.16	SENDER	164
20.17	SENDERS	164
20.18	SHORT-NAME	164
20.19	SI-UNIT	165
20.20	SJW	166
21	<b>SPANSPEC ... SW-UNIT-DISPLAY</b>	<b>168</b>
21.1	SPANSPEC	168
21.2	STATE	168
21.3	STATE-1	169
21.4	STD	169
21.5	SUB	170
21.6	SUBTITLE	171
21.7	SUP	171
21.8	SW-ASAP-6-PRM-METHOD	171
21.9	SW-BASE-TYPE	172
21.10	SW-COMPU-GENERIC-MATH	172
21.11	SW-COMPU-METHOD	173



21.12	SW-COMPU-METHOD-REF	174
21.13	SW-COMPU-METHOD-TABLE	174
21.14	SW-COMPU-METHOD-TEXT	175
21.15	SW-COMPU-METHOD-TEXT-PAIR	176
21.16	SW-COMPU-METHOD-VALUE-PAIR	176
21.17	SW-COMPU-METHODS	177
21.18	SW-LIMITS	177
21.19	SW-UNIT	178
21.20	SW-UNIT-DISPLAY	179
22	<b>SW-UNIT-FROM-REF-METHOD ... SYSTEM-OVERVIEW</b>	<b>180</b>
22.1	SW-UNIT-FROM-REF-METHOD	180
22.2	SW-UNIT-REF	180
22.3	SW-UNIT-TO-REF-METHOD	180
22.4	SW-UNITS	181
22.5	SYNC-EDGE	181
22.6	SYSTEM-OVERVIEW	182
23	<b>TABLE ... TT</b>	<b>183</b>
23.1	TABLE	183
23.2	TBD	183
23.3	TBODY	184
23.4	TBR	185
23.5	TEAM-MEMBER	185
23.6	TEAM-MEMBER-REF	186
23.7	TEAM-MEMBER-REFS	187
23.8	TEAM-MEMBERS	187
23.9	TEX-MATH	188
23.10	TEXT	188
23.11	TFOOT	189
23.12	TGROUP	189
23.13	THEAD	190
23.14	TOL	191
23.15	TOPIC-1	191
23.16	TOPIC-2	192
23.17	TOPOLOGY-TYPE	193
23.18	TRANSMISSION-PRMS	194
23.19	TRANSMISSION-SPEC	194
23.20	TT	195

24	<b>TYP ... TYP</b>	<b>197</b>
24.1	TYP	197
25	<b>UNIT ... USED-LANGUAGES</b>	<b>198</b>
25.1	UNIT	198
25.2	USED-LANGUAGES	198
26	<b>V ... VERBATIM</b>	<b>199</b>
26.1	V	199
26.2	VALUE	199
26.3	VARIANT-CHAR	199
26.4	VARIANT-CHAR-ASSIGN	200
26.5	VARIANT-CHAR-ASSIGNS	200
26.6	VARIANT-CHAR-REF	201
26.7	VARIANT-CHAR-VALUE	201
26.8	VARIANT-CHARS	202
26.9	VARIANT-DEF	202
26.10	VARIANT-DEF-REF	203
26.11	VARIANT-DEF-REFS	203
26.12	VARIANT-DEFS	204
26.13	VARIANT-SPEC	204
26.14	VERBATIM	205
27	<b>XDOC ... XREF</b>	<b>207</b>
27.1	XDOC	207
27.2	XFILE	207
27.3	XREF	208
28	<b>ZIP ... ZIP</b>	<b>210</b>
28.1	ZIP	210
	Documentadministration	211
	Technical Terms	212

## List of Figures

Figure 1	convention in DTD diagrams	29
Figure 2	DTD-diagram for ABS	32
Figure 3	DTD-diagram for ACCEPTANCE-COND	32
Figure 4	DTD-diagram for ADD-INFO	33
Figure 5	DTD-diagram for ADD-SPEC	34
Figure 6	DTD-diagram for ADDRESS	35
Figure 7	DTD-diagram for ADMIN-DATA	35
Figure 8	DTD-diagram for BAUDRATE	37
Figure 9	DTD-diagram for BITSIZE	37
Figure 10	DTD-diagram for BTL-CYCLES	38
Figure 11	DTD-diagram for BYTE-ORDER	38
Figure 12	DTD-diagram for C-CODE	39
Figure 13	DTD-diagram for CALC-NET-MESSAGE-IDENTIFIERS	39
Figure 14	DTD-diagram for CHANGE	40
Figure 15	DTD-diagram for CHAPTER	41
Figure 16	DTD-diagram for CITY	42
Figure 17	DTD-diagram for CMT-INT	42
Figure 18	DTD-diagram for CMT-PHYS	43
Figure 19	DTD-diagram for CMT-TEXT	43
Figure 20	DTD-diagram for CODE	44
Figure 21	DTD-diagram for CODED	44
Figure 22	DTD-diagram for CODED-MAX	45
Figure 23	DTD-diagram for CODED-MIN	45
Figure 24	DTD-diagram for COLSPEC	46
Figure 25	DTD-diagram for COMPANIES	47
Figure 26	DTD-diagram for COMPANY	48
Figure 27	DTD-diagram for COMPANY-DOC-INFO	49
Figure 28	DTD-diagram for COMPANY-DOC-INFOS	49
Figure 29	DTD-diagram for COMPANY-REF	50
Figure 30	DTD-diagram for COMPANY-REVISION-INFO	51
Figure 31	DTD-diagram for COMPANY-REVISION-INFOS	51
Figure 32	DTD-diagram for COND	53
Figure 33	DTD-diagram for CONNECTION-COMP-1	53
Figure 34	DTD-diagram for CONNECTION-COMP-CLASS	54
Figure 35	DTD-diagram for CONNECTION-COMP-PRMS	55
Figure 36	DTD-diagram for CONNECTION-COMP-REF	55



Figure 37	DTD-diagram for CONNECTION-COMP-SPEC-1	56
Figure 38	DTD-diagram for CONNECTION-COMPS-1	57
Figure 39	DTD-diagram for CYCLE-TIME	57
Figure 40	DTD-diagram for DATE	58
Figure 41	DTD-diagram for DATE-1	58
Figure 42	DTD-diagram for DEF	59
Figure 43	DTD-diagram for DEF-ITEM	59
Figure 44	DTD-diagram for DEF-LIST	60
Figure 45	DTD-diagram for DEMARCATION-OTHER-PROJECTS	60
Figure 46	DTD-diagram for DEPARTMENT	61
Figure 47	DTD-diagram for DESC	61
Figure 48	DTD-diagram for DIR-HAND-OVER-DOC-DATA	62
Figure 49	DTD-diagram for DLC	62
Figure 50	DTD-diagram for DOC-LABEL	63
Figure 51	DTD-diagram for DOC-REVISION	63
Figure 52	DTD-diagram for DOC-REVISIONS	64
Figure 53	DTD-diagram for DRAWING-NUMBER	64
Figure 54	DTD-diagram for DRIVER-CONCEPT	65
Figure 55	DTD-diagram for E	66
Figure 56	DTD-diagram for EMAIL	66
Figure 57	DTD-diagram for ENTITY-NAME	67
Figure 58	DTD-diagram for ENTRY	67
Figure 59	DTD-diagram for ERROR-VALUE	68
Figure 60	DTD-diagram for ERROR-VALUES	69
Figure 61	DTD-diagram for FAX	70
Figure 62	DTD-diagram for FIGURE	70
Figure 63	DTD-diagram for FILE	71
Figure 64	DTD-diagram for FORMULA	71
Figure 65	DTD-diagram for FT	72
Figure 66	DTD-diagram for GENERAL-NET-SPEC	73
Figure 67	DTD-diagram for GENERAL-PROJECT-DATA	74
Figure 68	DTD-diagram for GENERIC-MATH	75
Figure 69	DTD-diagram for GRAPHIC	75
Figure 70	DTD-diagram for HOMEPAGE	78
Figure 71	DTD-diagram for IDENTIFIER	79
Figure 72	DTD-diagram for IDENTIFIER-BASE-ADDRESS	79
Figure 73	DTD-diagram for IDENTIFIER-MASK	80
Figure 74	DTD-diagram for IDENTIFIER-TYPE	80
Figure 75	DTD-diagram for IE	80

Figure 76	DTD-diagram for INDENT-SAMPLE	81
Figure 77	DTD-diagram for INIT-VALUE	82
Figure 78	DTD-diagram for INTEGRATION-CAPABILITY	82
Figure 79	DTD-diagram for INTERFACE-CIRCUIT	83
Figure 80	DTD-diagram for INTRODUCTION	84
Figure 81	DTD-diagram for ITEM	85
Figure 82	DTD-diagram for ITEM-LABEL	85
Figure 83	DTD-diagram for LABEL	87
Figure 84	DTD-diagram for LABELED-ITEM	88
Figure 85	DTD-diagram for LABELED-LIST	89
Figure 86	DTD-diagram for LANGUAGE	90
Figure 87	DTD-diagram for LATENCY-TIME	90
Figure 88	DTD-diagram for LIST	91
Figure 89	DTD-diagram for LOCS	91
Figure 90	DTD-diagram for LONG-NAME	92
Figure 91	DTD-diagram for LONG-NAME-1	93
Figure 92	DTD-diagram for MAX	94
Figure 93	DTD-diagram for MESSAGE-IDENTIFIER-OFFSET	94
Figure 94	DTD-diagram for MIN	95
Figure 95	DTD-diagram for MODIFICATION	95
Figure 96	DTD-diagram for MODIFICATIONS	96
Figure 97	DTD-diagram for MSRNET	97
Figure 98	DTD-diagram for MULTIPLEX-ENTRY	98
Figure 99	DTD-diagram for MULTIPLEX-SIGNAL-LIST	99
Figure 100	DTD-diagram for MULTIPLEX-SIGNAL-SET	99
Figure 101	DTD-diagram for MULTIPLEXOR	100
Figure 102	DTD-diagram for MULTIPLEXOR-VALUE	100
Figure 103	DTD-diagram for NA	101
Figure 104	DTD-diagram for NAMELOC	101
Figure 105	DTD-diagram for NCOI-1	102
Figure 106	DTD-diagram for NCOI-3	103
Figure 107	DTD-diagram for NET-ARCHITECTURE	104
Figure 108	DTD-diagram for NET-BLOCK-MODES	105
Figure 109	DTD-diagram for NET-DIAG-SPEC	105
Figure 110	DTD-diagram for NET-EMC-DESIGN	106
Figure 111	DTD-diagram for NET-ERROR-HANDLING	106
Figure 112	DTD-diagram for NET-INIT-SPEC	107
Figure 113	DTD-diagram for NET-INTERFACE-PRMS	108
Figure 114	DTD-diagram for NET-INTERFACE-SPEC	109



Figure 115	DTD-diagram for NET-LINE	110
Figure 116	DTD-diagram for NET-LINE-DESC	111
Figure 117	DTD-diagram for NET-LINE-SPEC	111
Figure 118	DTD-diagram for NET-LINES	112
Figure 119	DTD-diagram for NET-MESSAGE	112
Figure 120	DTD-diagram for NET-MESSAGE-DESC	113
Figure 121	DTD-diagram for NET-MESSAGE-IDENTIFIER	114
Figure 122	DTD-diagram for NET-MESSAGE-IDENTIFIERS	114
Figure 123	DTD-diagram for NET-MESSAGE-LAYOUT	115
Figure 124	DTD-diagram for NET-MESSAGE-SET	115
Figure 125	DTD-diagram for NET-MESSAGE-SETS	116
Figure 126	DTD-diagram for NET-MESSAGE-SIGNAL	116
Figure 127	DTD-diagram for NET-MESSAGE-SIGNALS	117
Figure 128	DTD-diagram for NET-MESSAGE-SPEC	117
Figure 129	DTD-diagram for NET-MESSAGES	118
Figure 130	DTD-diagram for NET-MGMT-SPEC	118
Figure 131	DTD-diagram for NET-NODE	119
Figure 132	DTD-diagram for NET-NODE-PORT	119
Figure 133	DTD-diagram for NET-NODE-PORT-REF	120
Figure 134	DTD-diagram for NET-NODE-PORTS	120
Figure 135	DTD-diagram for NET-NODE-REF	121
Figure 136	DTD-diagram for NET-NODE-SPEC	121
Figure 137	DTD-diagram for NET-NODE-VARIANTS	122
Figure 138	DTD-diagram for NET-NODES	122
Figure 139	DTD-diagram for NET-OPER-SPEC	123
Figure 140	DTD-diagram for NET-PORT-REF	123
Figure 141	DTD-diagram for NET-SIGNAL	124
Figure 142	DTD-diagram for NET-SIGNAL-CLASS	124
Figure 143	DTD-diagram for NET-SIGNAL-GROUP	126
Figure 144	DTD-diagram for NET-SIGNAL-GROUPS	126
Figure 145	DTD-diagram for NET-SIGNAL-REF	127
Figure 146	DTD-diagram for NET-SIGNAL-SPEC	127
Figure 147	DTD-diagram for NET-SIGNAL-SPEC-VARIANT	128
Figure 148	DTD-diagram for NET-SIGNAL-SPEC-VARIANTS	128
Figure 149	DTD-diagram for NET-SIGNALS	129
Figure 150	DTD-diagram for NET-TOPOLOGY-SPEC	130
Figure 151	DTD-diagram for NMLIST	131
Figure 152	DTD-diagram for NODE-TYPE	131
Figure 153	DTD-diagram for NODE-VARIANT	132

	Structure Principles of MSRNET.DTD MSRNET-EADOC	Page: 16/220
	Chapter: Table of Contents	Date: 2002-02-07 State: RD

Figure 154	DTD-diagram for NOTE	132
Figure 155	DTD-diagram for NUMBER	133
Figure 156	DTD-diagram for OBJECTIVES	134
Figure 157	DTD-diagram for OFFSET	134
Figure 158	DTD-diagram for OVERALL-PROJECT	135
Figure 159	DTD-diagram for P	136
Figure 160	DTD-diagram for PARALLEL-DESIGNS	137
Figure 161	DTD-diagram for PART-NUMBER	137
Figure 162	DTD-diagram for PHASE-RELATIONS	138
Figure 163	DTD-diagram for PHONE	138
Figure 164	DTD-diagram for PHYS	138
Figure 165	DTD-diagram for PHYS-MAX	139
Figure 166	DTD-diagram for PHYS-MIN	139
Figure 167	DTD-diagram for POSITION	140
Figure 168	DTD-diagram for POWERDOWN-RECEIVE-TIME	140
Figure 169	DTD-diagram for POWERUP-RECEIVE-TIME	141
Figure 170	DTD-diagram for POWERUP-TRANSMIT-TIME	141
Figure 171	DTD-diagram for PRIVATE-CODE	142
Figure 172	DTD-diagram for PRIVATE-CODES	142
Figure 173	DTD-diagram for PRM	143
Figure 174	DTD-diagram for PRM-CHAR	144
Figure 175	DTD-diagram for PRMS	145
Figure 176	DTD-diagram for PROG-CODE	145
Figure 177	DTD-diagram for PROJECT	146
Figure 178	DTD-diagram for PROJECT-DATA	147
Figure 179	DTD-diagram for PROJECT-SCHEDULE	148
Figure 180	DTD-diagram for PROTOCOL-CONFORMANCE	148
Figure 181	DTD-diagram for PROTOCOLS	149
Figure 182	DTD-diagram for PUBLISHER	149
Figure 183	DTD-diagram for PURCHASING-COND	150
Figure 184	DTD-diagram for REASON	151
Figure 185	DTD-diagram for REASON-ORDER	151
Figure 186	DTD-diagram for RECEIVERS	152
Figure 187	DTD-diagram for REMARK	152
Figure 188	DTD-diagram for REVISION-LABEL	153
Figure 189	DTD-diagram for ROLE	153
Figure 190	DTD-diagram for ROLES	154
Figure 191	DTD-diagram for ROW	154
Figure 192	DTD-diagram for SAMPLE	156

Figure 193	DTD-diagram for SAMPLE-POINT	156
Figure 194	DTD-diagram for SAMPLE-RATE	157
Figure 195	DTD-diagram for SAMPLE-REF	157
Figure 196	DTD-diagram for SAMPLE-SPEC	158
Figure 197	DTD-diagram for SAMPLES	158
Figure 198	DTD-diagram for SCHEDULE	159
Figure 199	DTD-diagram for SCHEMATIC-ELEMENT	159
Figure 200	DTD-diagram for SCHEMATIC-ELEMENTS	160
Figure 201	DTD-diagram for SEGMENT	160
Figure 202	DTD-diagram for SEGMENT-END-NODES	161
Figure 203	DTD-diagram for SEGMENT-LENGTH	161
Figure 204	DTD-diagram for SEGMENTATION-DESC	162
Figure 205	DTD-diagram for SEGMENTATION-SPEC	163
Figure 206	DTD-diagram for SEGMENTS	163
Figure 207	DTD-diagram for SENDER	164
Figure 208	DTD-diagram for SENDERS	164
Figure 209	DTD-diagram for SHORT-NAME	165
Figure 210	DTD-diagram for SI-UNIT	165
Figure 211	DTD-diagram for SJW	166
Figure 212	DTD-diagram for SPANSPEC	168
Figure 213	DTD-diagram for STATE	169
Figure 214	DTD-diagram for STATE-1	169
Figure 215	DTD-diagram for STD	170
Figure 216	DTD-diagram for SUB	170
Figure 217	DTD-diagram for SUBTITLE	171
Figure 218	DTD-diagram for SUP	171
Figure 219	DTD-diagram for SW-ASAP-6-PRM-METHOD	172
Figure 220	DTD-diagram for SW-BASE-TYPE	172
Figure 221	DTD-diagram for SW-COMPU-GENERIC-MATH	173
Figure 222	DTD-diagram for SW-COMPU-METHOD	173
Figure 223	DTD-diagram for SW-COMPU-METHOD-REF	174
Figure 224	DTD-diagram for SW-COMPU-METHOD-TABLE	175
Figure 225	DTD-diagram for SW-COMPU-METHOD-TEXT	175
Figure 226	DTD-diagram for SW-COMPU-METHOD-TEXT-PAIR	176
Figure 227	DTD-diagram for SW-COMPU-METHOD-VALUE-PAIR	177
Figure 228	DTD-diagram for SW-COMPU-METHODS	177
Figure 229	DTD-diagram for SW-LIMITS	178
Figure 230	DTD-diagram for SW-UNIT	178
Figure 231	DTD-diagram for SW-UNIT-DISPLAY	179

Figure 232	DTD-diagram for SW-UNIT-FROM-REF-METHOD	180
Figure 233	DTD-diagram for SW-UNIT-REF	180
Figure 234	DTD-diagram for SW-UNIT-TO-REF-METHOD	181
Figure 235	DTD-diagram for SW-UNITS	181
Figure 236	DTD-diagram for SYNC-EDGE	182
Figure 237	DTD-diagram for SYSTEM-OVERVIEW	182
Figure 238	DTD-diagram for TABLE	183
Figure 239	DTD-diagram for TBD	184
Figure 240	DTD-diagram for TBODY	184
Figure 241	DTD-diagram for TBR	185
Figure 242	DTD-diagram for TEAM-MEMBER	186
Figure 243	DTD-diagram for TEAM-MEMBER-REF	186
Figure 244	DTD-diagram for TEAM-MEMBER-REFS	187
Figure 245	DTD-diagram for TEAM-MEMBERS	188
Figure 246	DTD-diagram for TEX-MATH	188
Figure 247	DTD-diagram for TEXT	189
Figure 248	DTD-diagram for TFOOT	189
Figure 249	DTD-diagram for TGROUP	190
Figure 250	DTD-diagram for THEAD	190
Figure 251	DTD-diagram for TOL	191
Figure 252	DTD-diagram for TOPIC-1	192
Figure 253	DTD-diagram for TOPIC-2	193
Figure 254	DTD-diagram for TOPOLOGY-TYPE	193
Figure 255	DTD-diagram for TRANSMISSION-PRMS	194
Figure 256	DTD-diagram for TRANSMISSION-SPEC	195
Figure 257	DTD-diagram for TT	195
Figure 258	DTD-diagram for TYP	197
Figure 259	DTD-diagram for UNIT	198
Figure 260	DTD-diagram for USED-LANGUAGES	198
Figure 261	DTD-diagram for V	199
Figure 262	DTD-diagram for VALUE	199
Figure 263	DTD-diagram for VARIANT-CHAR	200
Figure 264	DTD-diagram for VARIANT-CHAR-ASSIGN	200
Figure 265	DTD-diagram for VARIANT-CHAR-ASSIGNS	201
Figure 266	DTD-diagram for VARIANT-CHAR-REF	201
Figure 267	DTD-diagram for VARIANT-CHAR-VALUE	202
Figure 268	DTD-diagram for VARIANT-CHARS	202
Figure 269	DTD-diagram for VARIANT-DEF	203
Figure 270	DTD-diagram for VARIANT-DEF-REF	203

	<p style="text-align: center;">Structure Principles of MSRNET.DTD MSRNET-EADOC</p> <p>Chapter:           Table of Contents</p>	<p>Page:    19/220 Date:     2002-02-07 State:    RD</p>
---	--	--

Figure 271	DTD-diagram for VARIANT-DEF-REFS	204
Figure 272	DTD-diagram for VARIANT-DEFS	204
Figure 273	DTD-diagram for VARIANT-SPEC	205
Figure 274	DTD-diagram for VERBATIM	205
Figure 275	DTD-diagram for XDOC	207
Figure 276	DTD-diagram for XFILE	207
Figure 277	DTD-diagram for XREF	208
Figure 278	DTD-diagram for ZIP	210

## List of Tables

Table 1	Attributes for ABS	32
Table 2	Attributes for ACCEPTANCE-COND	33
Table 3	Attributes for ADD-INFO	34
Table 4	Attributes for ADD-SPEC	34
Table 5	Attributes for ADDRESS	35
Table 6	Attributes for ADMIN-DATA	36
Table 7	Attributes for BAUDRATE	37
Table 8	Attributes for BITSIZE	37
Table 9	Attributes for BTL-CYCLES	38
Table 10	Attributes for BYTE-ORDER	38
Table 11	Attributes for C-CODE	39
Table 12	Attributes for CALC-NET-MESSAGE-IDENTIFIERS	39
Table 13	Attributes for CHANGE	40
Table 14	Attributes for CHAPTER	41
Table 15	Attributes for CITY	42
Table 16	Attributes for CMT-INT	42
Table 17	Attributes for CMT-PHYS	43
Table 18	Attributes for CMT-TEXT	43
Table 19	Attributes for CODE	44
Table 20	Attributes for CODED	44
Table 21	Attributes for CODED-MAX	45
Table 22	Attributes for CODED-MIN	45
Table 23	Attributes for COLSPEC	46
Table 24	Attributes for COMPANIES	47
Table 25	Attributes for COMPANY	48
Table 26	Attributes for COMPANY-DOC-INFO	49
Table 27	Attributes for COMPANY-DOC-INFOS	50
Table 28	Attributes for COMPANY-REF	50
Table 29	Attributes for COMPANY-REVISION-INFO	51
Table 30	Attributes for COMPANY-REVISION-INFOS	52
Table 31	Attributes for COND	53
Table 32	Attributes for CONNECTION-COMP-1	54
Table 33	Attributes for CONNECTION-COMP-CLASS	54
Table 34	Attributes for CONNECTION-COMP-PRMS	55
Table 35	Attributes for CONNECTION-COMP-REF	55
Table 36	Attributes for CONNECTION-COMP-SPEC-1	56



Table 37	Attributes for CONNECTION-COMPS-1	57
Table 38	Attributes for CYCLE-TIME	57
Table 39	Attributes for DATE	58
Table 40	Attributes for DATE-1	58
Table 41	Attributes for DEF	59
Table 42	Attributes for DEF-ITEM	59
Table 43	Attributes for DEF-LIST	60
Table 44	Attributes for DEMARCATION-OTHER-PROJECTS	60
Table 45	Attributes for DEPARTMENT	61
Table 46	Attributes for DESC	61
Table 47	Attributes for DIR-HAND-OVER-DOC-DATA	62
Table 48	Attributes for DLC	62
Table 49	Attributes for DOC-LABEL	63
Table 50	Attributes for DOC-REVISION	63
Table 51	Attributes for DOC-REVISIONS	64
Table 52	Attributes for DRAWING-NUMBER	64
Table 53	Attributes for DRIVER-CONCEPT	65
Table 54	Attributes for E	66
Table 55	Attributes for EMAIL	66
Table 56	Attributes for ENTITY-NAME	67
Table 57	Attributes for ENTRY	68
Table 58	Attributes for ERROR-VALUE	68
Table 59	Attributes for ERROR-VALUES	69
Table 60	Attributes for FAX	70
Table 61	Attributes for FIGURE	70
Table 62	Attributes for FILE	71
Table 63	Attributes for FORMULA	72
Table 64	Attributes for FT	72
Table 65	Attributes for GENERAL-NET-SPEC	73
Table 66	Attributes for GENERAL-PROJECT-DATA	74
Table 67	Attributes for GENERIC-MATH	75
Table 68	Attributes for GRAPHIC	76
Table 69	Attributes for HOMEPAGE	78
Table 70	Attributes for IDENTIFIER	79
Table 71	Attributes for IDENTIFIER-BASE-ADDRESS	79
Table 72	Attributes for IDENTIFIER-MASK	80
Table 73	Attributes for IDENTIFIER-TYPE	80
Table 74	Attributes for IE	81
Table 75	Attributes for INDENT-SAMPLE	81



Table 76	Attributes for INIT-VALUE	82
Table 77	Attributes for INTEGRATION-CAPABILITY	82
Table 78	Attributes for INTERFACE-CIRCUIT	83
Table 79	Attributes for INTRODUCTION	84
Table 80	Attributes for ITEM	85
Table 81	Attributes for ITEM-LABEL	86
Table 82	Attributes for LABEL	87
Table 83	Attributes for LABELED-ITEM	88
Table 84	Attributes for LABELED-LIST	89
Table 85	Attributes for LANGUAGE	90
Table 86	Attributes for LATENCY-TIME	90
Table 87	Attributes for LIST	91
Table 88	Attributes for LOCS	92
Table 89	Attributes for LONG-NAME	92
Table 90	Attributes for LONG-NAME-1	93
Table 91	Attributes for MAX	94
Table 92	Attributes for MESSAGE-IDENTIFIER-OFFSET	94
Table 93	Attributes for MIN	95
Table 94	Attributes for MODIFICATION	96
Table 95	Attributes for MODIFICATIONS	96
Table 96	Attributes for MSRNET	98
Table 97	Attributes for MULTIPLEX-ENTRY	99
Table 98	Attributes for MULTIPLEX-SIGNAL-LIST	99
Table 99	Attributes for MULTIPLEX-SIGNAL-SET	99
Table 100	Attributes for MULTIPLEXOR	100
Table 101	Attributes for MULTIPLEXOR-VALUE	100
Table 102	Attributes for NA	101
Table 103	Attributes for NAMELOC	102
Table 104	Attributes for NCOI-1	102
Table 105	Attributes for NCOI-3	103
Table 106	Attributes for NET-ARCHITECTURE	105
Table 107	Attributes for NET-BLOCK-MODES	105
Table 108	Attributes for NET-DIAG-SPEC	105
Table 109	Attributes for NET-EMC-DESIGN	106
Table 110	Attributes for NET-ERROR-HANDLING	107
Table 111	Attributes for NET-INIT-SPEC	107
Table 112	Attributes for NET-INTERFACE-PRMS	108
Table 113	Attributes for NET-INTERFACE-SPEC	110
Table 114	Attributes for NET-LINE	110



Table 115	Attributes for NET-LINE-DESC	111
Table 116	Attributes for NET-LINE-SPEC	111
Table 117	Attributes for NET-LINES	112
Table 118	Attributes for NET-MESSAGE	113
Table 119	Attributes for NET-MESSAGE-DESC	113
Table 120	Attributes for NET-MESSAGE-IDENTIFIER	114
Table 121	Attributes for NET-MESSAGE-IDENTIFIERS	114
Table 122	Attributes for NET-MESSAGE-LAYOUT	115
Table 123	Attributes for NET-MESSAGE-SET	116
Table 124	Attributes for NET-MESSAGE-SETS	116
Table 125	Attributes for NET-MESSAGE-SIGNAL	117
Table 126	Attributes for NET-MESSAGE-SIGNALS	117
Table 127	Attributes for NET-MESSAGE-SPEC	117
Table 128	Attributes for NET-MESSAGES	118
Table 129	Attributes for NET-MGMT-SPEC	118
Table 130	Attributes for NET-NODE	119
Table 131	Attributes for NET-NODE-PORT	119
Table 132	Attributes for NET-NODE-PORT-REF	120
Table 133	Attributes for NET-NODE-PORTS	120
Table 134	Attributes for NET-NODE-REF	121
Table 135	Attributes for NET-NODE-SPEC	121
Table 136	Attributes for NET-NODE-VARIANTS	122
Table 137	Attributes for NET-NODES	122
Table 138	Attributes for NET-OPER-SPEC	123
Table 139	Attributes for NET-PORT-REF	124
Table 140	Attributes for NET-SIGNAL	124
Table 141	Attributes for NET-SIGNAL-CLASS	125
Table 142	Attributes for NET-SIGNAL-GROUP	126
Table 143	Attributes for NET-SIGNAL-GROUPS	126
Table 144	Attributes for NET-SIGNAL-REF	127
Table 145	Attributes for NET-SIGNAL-SPEC	128
Table 146	Attributes for NET-SIGNAL-SPEC-VARIANT	128
Table 147	Attributes for NET-SIGNAL-SPEC-VARIANTS	129
Table 148	Attributes for NET-SIGNALS	129
Table 149	Attributes for NET-TOPOLOGY-SPEC	130
Table 150	Attributes for NMLIST	131
Table 151	Attributes for NODE-TYPE	131
Table 152	Attributes for NODE-VARIANT	132
Table 153	Attributes for NOTE	132



Table 154	Attributes for NUMBER	133
Table 155	Attributes for OBJECTIVES	134
Table 156	Attributes for OFFSET	134
Table 157	Attributes for OVERALL-PROJECT	135
Table 158	Attributes for P	136
Table 159	Attributes for PARALLEL-DESIGNS	137
Table 160	Attributes for PART-NUMBER	137
Table 161	Attributes for PHASE-RELATIONS	138
Table 162	Attributes for PHONE	138
Table 163	Attributes for PHYS	139
Table 164	Attributes for PHYS-MAX	139
Table 165	Attributes for PHYS-MIN	139
Table 166	Attributes for POSITION	140
Table 167	Attributes for POWERDOWN-RECEIVE-TIME	140
Table 168	Attributes for POWERUP-RECEIVE-TIME	141
Table 169	Attributes for POWERUP-TRANSMIT-TIME	141
Table 170	Attributes for PRIVATE-CODE	142
Table 171	Attributes for PRIVATE-CODES	142
Table 172	Attributes for PRM	143
Table 173	Attributes for PRM-CHAR	144
Table 174	Attributes for PRMS	145
Table 175	Attributes for PROG-CODE	146
Table 176	Attributes for PROJECT	146
Table 177	Attributes for PROJECT-DATA	147
Table 178	Attributes for PROJECT-SCHEDULE	148
Table 179	Attributes for PROTOCOL-CONFORMANCE	148
Table 180	Attributes for PROTOCOLS	149
Table 181	Attributes for PUBLISHER	149
Table 182	Attributes for PURCHASING-COND	150
Table 183	Attributes for REASON	151
Table 184	Attributes for REASON-ORDER	152
Table 185	Attributes for RECEIVERS	152
Table 186	Attributes for REMARK	153
Table 187	Attributes for REVISION-LABEL	153
Table 188	Attributes for ROLE	154
Table 189	Attributes for ROLES	154
Table 190	Attributes for ROW	155
Table 191	Attributes for SAMPLE	156
Table 192	Attributes for SAMPLE-POINT	156



Table 193	Attributes for SAMPLE-RATE	157
Table 194	Attributes for SAMPLE-REF	157
Table 195	Attributes for SAMPLE-SPEC	158
Table 196	Attributes for SAMPLES	158
Table 197	Attributes for SCHEDULE	159
Table 198	Attributes for SCHEMATIC-ELEMENT	159
Table 199	Attributes for SCHEMATIC-ELEMENTS	160
Table 200	Attributes for SEGMENT	160
Table 201	Attributes for SEGMENT-END-NODES	161
Table 202	Attributes for SEGMENT-LENGTH	161
Table 203	Attributes for SEGMENTATION-DESC	162
Table 204	Attributes for SEGMENTATION-SPEC	163
Table 205	Attributes for SEGMENTS	164
Table 206	Attributes for SENDER	164
Table 207	Attributes for SENDERS	164
Table 208	Attributes for SHORT-NAME	165
Table 209	Attributes for SI-UNIT	166
Table 210	Attributes for SJW	167
Table 211	Attributes for SPANSPEC	168
Table 212	Attributes for STATE	169
Table 213	Attributes for STATE-1	169
Table 214	Attributes for STD	170
Table 215	Attributes for SUB	171
Table 216	Attributes for SUBTITLE	171
Table 217	Attributes for SUP	171
Table 218	Attributes for SW-ASAP-6-PRM-METHOD	172
Table 219	Attributes for SW-BASE-TYPE	172
Table 220	Attributes for SW-COMPU-GENERIC-MATH	173
Table 221	Attributes for SW-COMPU-METHOD	174
Table 222	Attributes for SW-COMPU-METHOD-REF	174
Table 223	Attributes for SW-COMPU-METHOD-TABLE	175
Table 224	Attributes for SW-COMPU-METHOD-TEXT	176
Table 225	Attributes for SW-COMPU-METHOD-TEXT-PAIR	176
Table 226	Attributes for SW-COMPU-METHOD-VALUE-PAIR	177
Table 227	Attributes for SW-COMPU-METHODS	177
Table 228	Attributes for SW-LIMITS	178
Table 229	Attributes for SW-UNIT	179
Table 230	Attributes for SW-UNIT-DISPLAY	179
Table 231	Attributes for SW-UNIT-FROM-REF-METHOD	180

Table 232	Attributes for SW-UNIT-REF	180
Table 233	Attributes for SW-UNIT-TO-REF-METHOD	181
Table 234	Attributes for SW-UNITS	181
Table 235	Attributes for SYNC-EDGE	182
Table 236	Attributes for SYSTEM-OVERVIEW	182
Table 237	Attributes for TABLE	183
Table 238	Attributes for TBD	184
Table 239	Attributes for TBODY	184
Table 240	Attributes for TBR	185
Table 241	Attributes for TEAM-MEMBER	186
Table 242	Attributes for TEAM-MEMBER-REF	187
Table 243	Attributes for TEAM-MEMBER-REFS	187
Table 244	Attributes for TEAM-MEMBERS	188
Table 245	Attributes for TEX-MATH	188
Table 246	Attributes for TEXT	189
Table 247	Attributes for TFOOT	189
Table 248	Attributes for TGROUP	190
Table 249	Attributes for THEAD	191
Table 250	Attributes for TOL	191
Table 251	Attributes for TOPIC-1	192
Table 252	Attributes for TOPIC-2	193
Table 253	Attributes for TOPOLOGY-TYPE	194
Table 254	Attributes for TRANSMISSION-PRMS	194
Table 255	Attributes for TRANSMISSION-SPEC	195
Table 256	Attributes for TT	195
Table 257	Attributes for TYP	197
Table 258	Attributes for UNIT	198
Table 259	Attributes for USED-LANGUAGES	198
Table 260	Attributes for V	199
Table 261	Attributes for VALUE	199
Table 262	Attributes for VARIANT-CHAR	200
Table 263	Attributes for VARIANT-CHAR-ASSIGN	200
Table 264	Attributes for VARIANT-CHAR-ASSIGNS	201
Table 265	Attributes for VARIANT-CHAR-REF	201
Table 266	Attributes for VARIANT-CHAR-VALUE	202
Table 267	Attributes for VARIANT-CHARS	202
Table 268	Attributes for VARIANT-DEF	203
Table 269	Attributes for VARIANT-DEF-REF	203
Table 270	Attributes for VARIANT-DEF-REFS	204

	Structure Principles of MSRNET.DTD MSRNET-EADOC	Page: 27/220 Date: 2002-02-07 State: RD
Chapter:	Table of Contents	

Table 271	Attributes for VARIANT-DEFS	204
Table 272	Attributes for VARIANT-SPEC	205
Table 273	Attributes for VERBATIM	205
Table 274	Attributes for XDOC	207
Table 275	Attributes for XFILE	208
Table 276	Attributes for XREF	208
Table 277	Attributes for ZIP	210



## Introduction

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2002-02-07 <a href="#">For details refer to nr. 1, Page 211</a>	Dipl.-Ing- Roman Reimer			
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# 1 How to read this document

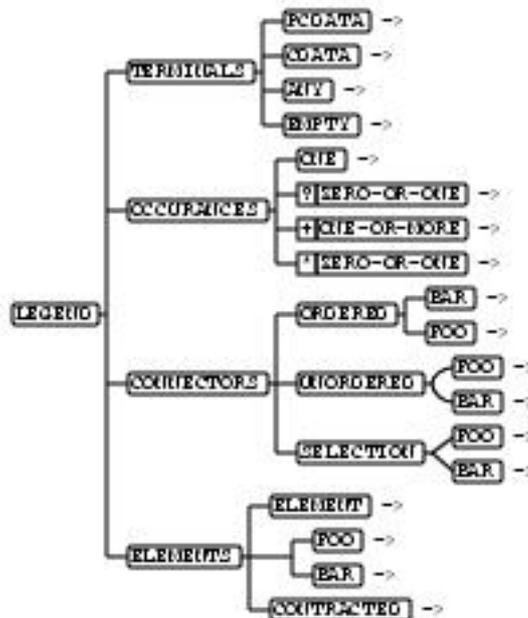
## The following conventions apply

This document is written using *MSRREP DTD*. The following conventions apply to this document:

- <msrsw>** SGML elements are noted as technical term **[type]=SGMLTAG**.
- [type]** SGML attributes are noted as technical term **[type]=SGML-attribute**.
- sgml-attribute* Values of SGML attributes or discrete values for elements are noted as technical term **[type]=code**
- ASAP2* The considered languages resp. DTDs are marked as technical term **[type]=product**.
- ASAP* The committees are noted as **[type]=organization**
- ECU* Objects in general are marked as technical terms **[type]=other**. This might be automotive equipments general objects such as variables etc.

## Graphical conventions used in DTD diagrams

The structure of DTDs is shown in the MSR document as DTD diagrams (see [Figure 1 convention in DTD diagrams p. 29](#)).



legend.bmp

Figure 1: convention in DTD diagrams

	Structure Principles of MSRNET.DTD MSRNET-EADOC	Page: 30/220
	Chapter: How to read this document	Date: 2002-02-07 State: RD

The meaning of the symbols is:

PCDATA	<b>Processable Character Data (PCDATA)</b> Data that consists of zero or more characters of both text and markup. PCDATA is a declared content keyword. PCDATA is used to indicate that all markup delimiters defined in the SGML declaration will be recognized by the parser as markup in the given element rather than data characters.
RCDATA	<b>Replaceable Character Data (RCDATA)</b> is data that consists of zero or more characters, in which references to substitutions are not recognized (i.e. RCDATA may contain text and entity references, but no sub-elements). See also: CDATA PCDATA.
CDATA	<b>Character Data (CDATA)</b> consists of zero or more text characters, where no markup of any kind is recognized. CDATA is an SGML term. Note that character references are allowed in a CDATA entity (substitution) but not in CDATA content.
ANY	a terminal type indicating that the object may contain text or any element defined in the model.
EMPTY	a terminal type keyword used to indicate that there is no data (i.e. no content, sub-elements or end-tags) for the object allowed in the document instance. This keyword is often used to describe elements that are placeholders or are pointers to external or system-generated data.
One	indicates that the element or the element group occurs exactly once
ZERO-OR-ONE	indicates that the element or the element group is optional
ONE-OR-MORE	indicates that the element or the element group occurs multiple times but at least once
ZERO-OR-MORE	indicates that the element or the element group occurs multiple times but also can be missed (optional)
ORDERED	a connector used to specify that the sibling objects must appear in the document in the order shown in the model
UNORDERED	a connector used to specify that the sibling objects can appear in any order in the document.
SELECTION	a connector used to specify that only one of the sibling objects can appear in the document.
ELEMENT	indicates a single SGML structure element
COLLAPSED	indicates, that the content of the element is not displayed here

	Structure Principles of MSRNET.DTD MSRNET-EADOC Chapter: Allgemeine Projektdaten	Page: 31/220 Date: 2002-02-07 State: RD
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## 2 Allgemeine Projektdaten

# 1 ABS ... ADMIN-DATA

## 1.1 ABS

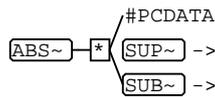


Figure 2: DTD-diagram for ABS

Child elements `<sup>` `<sub>`

parent elements `<prm-char>`

Table 1: Attributes for ABS

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

Description Absolute value for parameter characteristics. See parameter model (`<sw-prm>`).

Example

```

<prm>
  <long-name>long designation</long-name>
  <short-name>short designation</short-name>
  <prm-char>
    <abs>10</abs>
    <tol>5</tol>
    <unit>°C</unit>
  </prm-char>
</prm>
<prm>
  <long-name>long designation</long-name>
  <short-name>short designation</short-name>
  <prm-char>
    <min>0</min>
    <typ>5</typ>
    <max>0</max>
    <unit>°C</unit>
  </prm-char>
</prm>
    
```

Description This element defines an absolute value which is adjusted or measured.

## 1.2 ACCEPTANCE-COND

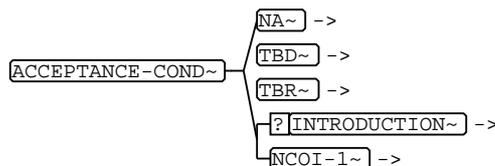


Figure 3: DTD-diagram for ACCEPTANCE-COND

Child elements **<na> <tbd> <tbr> <introduction> <ncoi-1>**

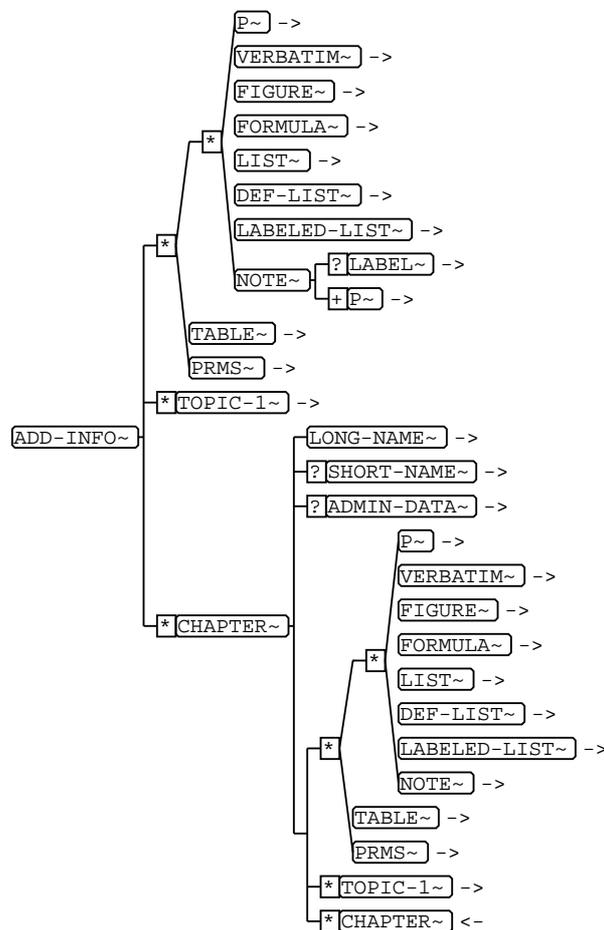
parent elements **<general-project-data>**

**Table 2: Attributes for ACCEPTANCE-COND**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description This element contains a description of the acceptance conditions of this project.

## 1.3 ADD-INFO



**Figure 4: DTD-diagram for ADD-INFO**

Child elements **<p> <verbatim> <figure> <formula> <list> <def-list> <labeled-list> <note> <table> <prms> <topic-1> <chapter>**

parent elements **<interface-circuit>** **<net-interface-spec>** **<net-message>** **<net-signal-spec>** **<net-signal-spec-variant>** **<transmission-spec>**

**Table 3: Attributes for ADD-INFO**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Additional information (which is not covered by the existing structure) can be given in this element. In opposite to **<add-spec>**, **<add-info>** complements an existing structure, while **<add-spec>** is used where no structure exists at all.

Example

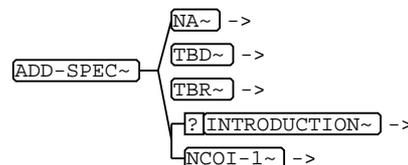
```

<sw-function-variant>
  ...
  <add-info>
    <prms>
      <prm>
        <long-name>program-language</long-name>
        <short-name>program-language</short-name>
        <prm-char><text>ASS</text>
        </prm-char>
      </prm>
    </prms>
  </add-info>
</sw-function-variant>

```

Description This element allows the author to make additional informations in form of parameter models for tests.

## 1.4 ADD-SPEC



**Figure 5: DTD-diagram for ADD-SPEC**

Child elements **<na>** **<tbd>** **<tbr>** **<introduction>** **<ncoi-1>**

parent elements **<general-project-data>** **<msrnet>** **<net-architecture>** **<net-oper-spec>** **<net-topology-spec>**

**Table 4: Attributes for ADD-SPEC**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description This element allows to give additional specifications for which no explicit structure exists. This element usually enforces another chapter in printed material. In opposite to **<add-info>**, **<add-spec>** is used as a substitute if no structure exists for the topic, while **<add-info>** is used where an existing structure is not appropriate.

Example

Description This chapter allows the author to define additional specifications.

## 1.5 ADDRESS

`ADDRESS~` — #PCDATA

Figure 6: DTD-diagram for ADDRESS

Child elements none

parent elements `<team-member>`

Table 5: Attributes for ADDRESS

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Definition of the address of a team member.

## 1.6 ADMIN-DATA

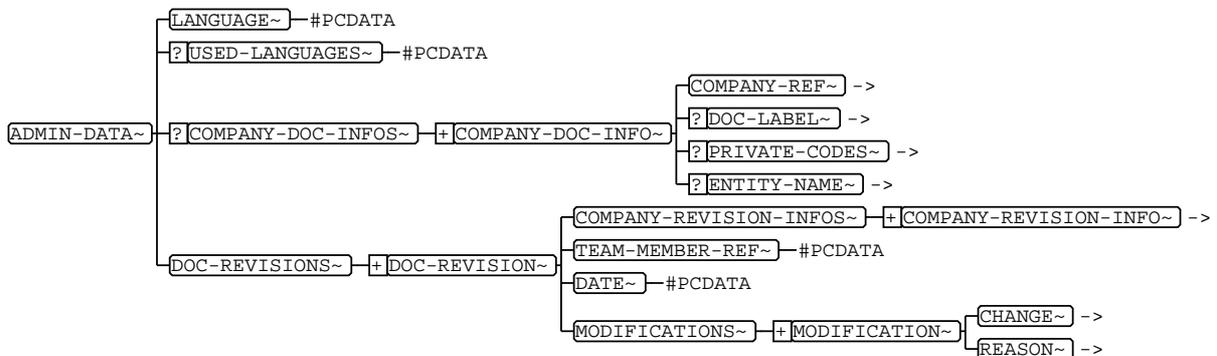


Figure 7: DTD-diagram for ADMIN-DATA

Child elements `<language>` `<used-languages>` `<company-doc-infos>` `<doc-revisions>`

parent elements `<chapter>` `<connection-comp-1>` `<connection-comp-spec-1>` `<general-net-spec>` `<general-project-data>` `<msrnet>` `<net-architecture>` `<net-interface-spec>` `<net-message-spec>` `<net-oper-spec>` `<net-signal-spec>` `<net-topology-spec>` `<sw-compu-method>` `<sw-compu-methods>` `<sw-unit>` `<sw-units>`

**Table 6: Attributes for ADMIN-DATA**

Name	Type	Class	Value	Remark
[F-CHILD-TYPE]	cdata	fixed	language:selection	
[S]	cdata	implied		

**Description** This element allows to specify administrative information regarding the sub-structure defined by the parent. This information may be versioning, fragmentation etc. The information rather covers the administration of the SGML-instance than the administration of the described subjects.

**Example**

```

<admin-data>
  <language>de</language>
  <doc-revisions>
    <doc-revision>
      <company-revision-infos>
        <company-revision-info>
          <company-ref>msr</company-ref>
          <revision-label>10.4</revision-label>
          <state>wd</state>
        </company-revision-info>
      </company-revision-infos>
      <team-member-ref></team-member-ref>
      <date>1.1.99</date>
      <modifications>
        <modification type="part-related">
          <change>Introduced new Architecture</change>
          <reason>Customer request</reason>
        </modification>
      </modifications>
    </doc-revision>
  </doc-revisions>
</admin-data>

```

**Description** Definition of the administrative data of this document fragment.

## 2 BAUDRATE ... BYTE-ORDER

### 2.1 BAUDRATE

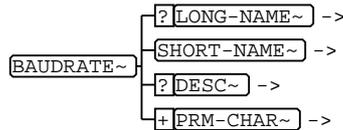


Figure 8: DTD-diagram for BAUDRATE

Child elements **<long-name>** **<short-name>** **<desc>** **<prm-char>**

parent elements **<net-interface-prms>**

Table 7: Attributes for BAUDRATE

Name	Type	Class	Value	Remark
[F-ID-CLASS]	name	fixed	PRM	
[ID]	id	required		
[S]	cdata	implied		

### 2.2 BITSIZE



Figure 9: DTD-diagram for BITSIZE

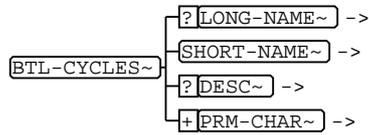
Child elements none

parent elements **<multiplexor>** **<net-signal-spec-variant>**

Table 8: Attributes for BITSIZE

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 2.3 BTL-CYCLES



images/BTL-CYCLES.bmp

Figure 10: DTD-diagram for BTL-CYCLES

Child elements `<long-name>` `<short-name>` `<desc>` `<prm-char>`

parent elements `<net-interface-prms>`

Table 9: Attributes for BTL-CYCLES

Name	Type	Class	Value	Remark
[F-ID-CLASS]	name	fixed	PRM	
[ID]	id	required		
[S]	cdata	implied		

## 2.4 BYTE-ORDER



images/BYTE-ORDER.bmp

Figure 11: DTD-diagram for BYTE-ORDER

Child elements none

parent elements `<net-message>`

Table 10: Attributes for BYTE-ORDER

Name	Type	Class	Value	Remark
[S]	cdata	implied		

### 3 C-CODE ... COMPANY-REVISION-INFOS

#### 3.1 C-CODE

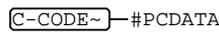
 `C-CODE~` — #PCDATA

Figure 12: DTD-diagram for C-CODE

Child elements none

parent elements `<formula>`

Table 11: Attributes for C-CODE

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

Description This element is used to specify the code of the formula transferred to the programming language C.

#### 3.2 CALC-NET-MESSAGE-IDENTIFIERS

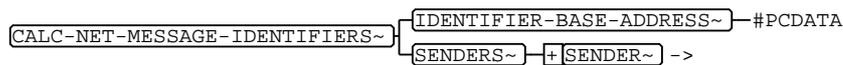
 `CALC-NET-MESSAGE-IDENTIFIERS~` { `IDENTIFIER-BASE-ADDRESS~` — #PCDATA  
`SENDERS~` — + `SENDER~` — ->

Figure 13: DTD-diagram for CALC-NET-MESSAGE-IDENTIFIERS

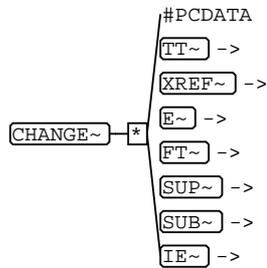
Child elements `<identifier-base-address>` `<senders>`

parent elements `<net-message>`

Table 12: Attributes for CALC-NET-MESSAGE-IDENTIFIERS

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

### 3.3 CHANGE



images/CHANGE.bmp

Figure 14: DTD-diagram for CHANGE

Child elements `<tt>` `<xref>` `<e>` `<ft>` `<sup>` `<sub>` `<ie>`

parent elements `<modification>`

Table 13: Attributes for CHANGE

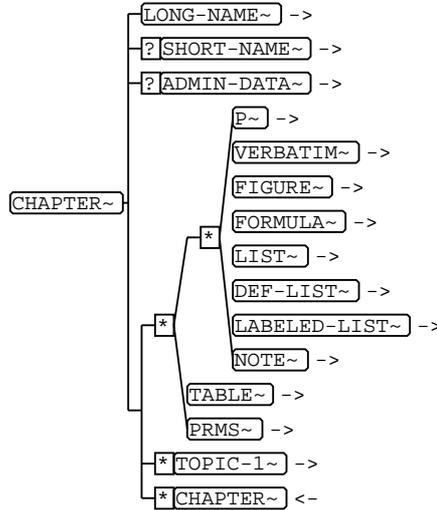
Name	Type	Class	Value	Remark
[S]	CDATA	implied		

Description More or less detailed description of the performed changes can be given here.

Example `<modification>`  
`<change>element description inserted</change>`  
`<reason>for better understanding</reason>`  
`</modification>`

Description Describes the change of a document

### 3.4 CHAPTER



images/CHAPTER.bmp

Figure 15: DTD-diagram for CHAPTER

Child elements `<long-name>` `<short-name>` `<admin-data>` `<p>` `<verbatim>` `<figure>`  
`<formula>` `<list>` `<def-list>` `<labeled-list>` `<note>` `<prms>`  
`<topic-1>` `<chapter>`

parent elements `<add-info>` `<chapter>` `<driver-concept>` `<ncoi-1>` `<net-emc-design>`  
`<net-line-desc>` `<net-message-desc>` `<net-message-layout>` `<segmentation-desc>`

Table 14: Attributes for CHAPTER

Name	Type	Class	Value	Remark
[BREAK]	nmtkgrp	implied	BREAK NO-BREAK	
[F-ID-CLASS]	name	fixed	CHAPTER	
[HELP-ENTRY]	cdata	implied		
[ID]	id	required		
[S]	cdata	implied		

Description `<chapter>` is used to put a presentation structure on prose descriptions. Chapters can be structured hierachically.

Example

```

<chapter id="ch1" help-entry="chapter">
  <long-name>Chapter1</long-name>
  <short-name></short-name>
  <p>This is the text in the chapter.</p>
  <figure id="fig1" help-entry="synopic diagram"><
    long-name>principal circuit diagram</long-name>
    <short-name>psb</short-name>
    <graphic filename="bild.bmp" notation="eps"></graphic>
  </figure>
</chapter>
<chapter id="ch11">
  <long-name>Chapter 1.1</long-name>
  <short-name></short-name>

```

```

        <p></p>
      <p></p>
    </chapter>
  </chapter>

```

Description This element is used to write one or more not content oriented chapters. There are also sub chapters possible.

## 3.5 CITY

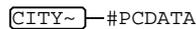


Figure 16: DTD-diagram for CITY

Child elements none

parent elements <team-member>

Table 15: Attributes for CITY

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

Description Definition of the city of the address.

## 3.6 CMT-INT



Figure 17: DTD-diagram for CMT-INT

Child elements none

parent elements <sw-compu-method-text-pair> <sw-compu-method-value-pair>

Table 16: Attributes for CMT-INT

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

Description Internal value for a conversion formula

Example

```

<sw-compu-method-text>
  <sw-compu-method-text-pair>
    <cmt-int>0</cmt-int>
    <cmt-text>Heck</cmt-text>
  </cmt-compu-method-text-pair>
</sw-compu-method-text>

```

## 3.7 CMT-PHYS

#PCDATA

Figure 18: DTD-diagram for CMT-PHYS

Child elements none

parent elements **<sw-compu-method-value-pair>**

Table 17: Attributes for CMT-PHYS

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

Description Physical value for a conversion formula defined as conversion table.

Example

```

<sw-compu-method-table>
  <sw-compu-method-value-pair>
    <cmt-int>0</cmt-int>
    <cmt-phys>11</cmt-phys>
  </sw-compu-method-value-pair>
</sw-compu-method-table>
    
```

## 3.8 CMT-TEXT

#PCDATA

Figure 19: DTD-diagram for CMT-TEXT

Child elements none

parent elements **<sw-compu-method-text-pair>**

Table 18: Attributes for CMT-TEXT

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

Description Value in text form for a conversion formula.

Example

```

<sw-compu-method-text>
  <sw-compu-method-text-pair>
    <cmt-int>0</cmt-int>
    <cmt-text>Heck</cmt-text>
  </sw-compu-method-text-pair>
</sw-compu-method-text>
    
```

## 3.9 CODE

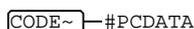


Figure 20: DTD-diagram for CODE

Child elements none

parent elements `<variant-char>` `<variant-char-value>` `<variant-def>`

Table 19: Attributes for CODE

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description The definition of variants end up in code names for variants resp. for variant characteristics resp. for values of variant characteristics. `<code>` takes these names. This code may be a number as well as a name.

Example `<code>007</code>`

Description This element contains the definition of the code.

## 3.10 CODED

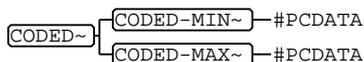


Figure 21: DTD-diagram for CODED

Child elements `<coded-min>` `<coded-max>`

parent elements `<sw-limits>` `<sw-limits>`

Table 20: Attributes for CODED

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Coded/internal values for limits.

Example

```

<sw-limits>
  <coded>
    <coded-min>0</coded-min>
    <coded-max>255</coded-max>
  </coded>
  <phys>
    <phys-min>0</phys-min>
    <phys-max>90</phys-max></phys>
</sw-limits>
    
```

## 3.11 CODED-MAX

`CODED-MAX~` — #PCDATA

**Figure 22: DTD-diagram for CODED-MAX**

Child elements none

parent elements `<coded>`

**Table 21: Attributes for CODED-MAX**

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

Description Maximum coded limiting value

Example `<coded-max>255</coded-max>`

## 3.12 CODED-MIN

`CODED-MIN~` — #PCDATA

**Figure 23: DTD-diagram for CODED-MIN**

Child elements none

parent elements `<coded>`

**Table 22: Attributes for CODED-MIN**

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

Description Minimum coded limiting value

Example `<coded-min>0</coded-min>`

### 3.13 COLSPEC

empty

**Figure 24: DTD-diagram for COLSPEC**

Child elements none

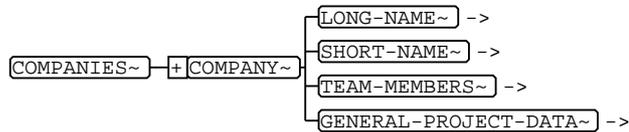
parent elements <tfoot> <tgroup> <thead>

**Table 23: Attributes for COLSPEC**

Name	Type	Class	Value	Remark
[ALIGN]	nmtkgrp	implied	LEFT RIGHT CENTER JUSTIFY CHAR	
[CHAR]	cdata	implied		
[CHAROFF]	nutoken	implied		
[COLNAME]	nmtoken	implied		
[COLNUM]	number	implied		
[COLSEP]	number	implied		
[COLWIDTH]	cdata	implied		
[ROWSEP]	number	implied		
[S]	cdata	implied		

Description Specifies a column, a vertical portion of a <entry>. The default values come from the <tgroup>, <thead> or <tfoot> starting the current group. Each <colspec> is for a single column, so it properly has a column number, column, implicitly in order starting from 1, and an optional colname by which it is known when used in any <spanspec> or in <entry>. A <colspec> set on <thead> or <tfoot> should be complete for all columns. It overrides those on the containing <tgroup> and applies to just the <thead> or <tfoot>. If there is no <colspec> used within <thead> or <tfoot>, then the <colspec> of the containing <tgroup> is used. <colspec>s from the containing <tgroup> apply to <tbody>.

## 3.14 COMPANIES



images/COMPANIES.bmp

**Figure 25: DTD-diagram for COMPANIES**

Child elements **<company>**

parent elements **<project>**

**Table 24: Attributes for COMPANIES**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Gets information about all companies participating in the project in question.

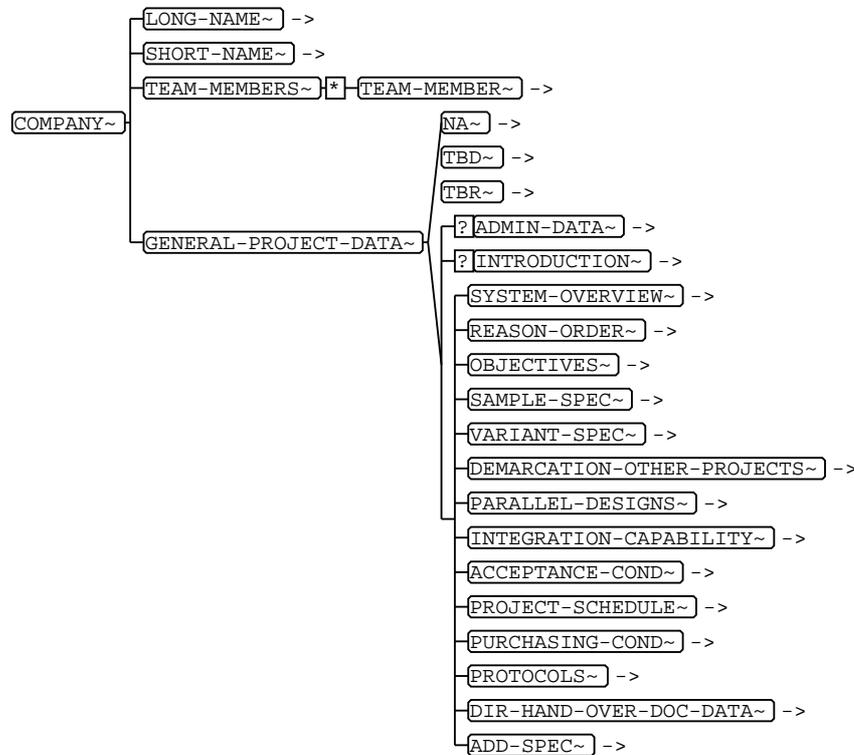
Example

```

<companies>
  <company role="supplier" id="bosch"></company>
  <company role="manufacturer" id="vw"></company>
</companies>
    
```

Description Definitions of some companies.

### 3.15 COMPANY



images/COMPANY.bmp

Figure 26: DTD-diagram for COMPANY

Child elements **<long-name> <short-name> <team-members> <general-project-data>**

parent elements **<companies>**

Table 25: Attributes for COMPANY

Name	Type	Class	Value	Remark
[F-CHILD-TYPE]	cdata	fixed	long-name:selection	
[F-ID-CLASS]	name	fixed	COMPANY	
[F-NAMESPACE]	names	fixed	SAMPLE TEAM-MEMBER VARIANT-DEF VARIANT-CHAR	
[ID]	id	required		
[ROLE]	nmtkgrp	required	MANUFACTURER SUPPLIER	
[S]	cdata	implied		

Description Company-specific details for a company participating in the project

**Example**

```
<company role="supplier" id="rb">
  <long-name>Robert Bosch GmbH</long-name>
  <short-name>rb</short-name>
  <team-members>
    <team-member id="ge"></team-member>
  </team-members>
  <general-project-data></general-project-data>
</company>
```

Description Definition of a company with all team members for this project.

### 3.16 COMPANY-DOC-INFO

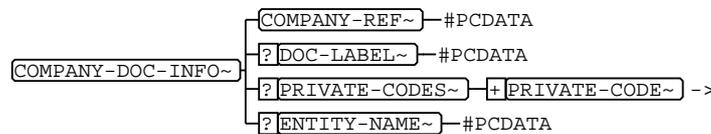


Figure 27: DTD-diagram for COMPANY-DOC-INFO

Child elements **<company-ref>** **<doc-label>** **<private-codes>** **<entity-name>**

parent elements **<company-doc-infos>**

Table 26: Attributes for COMPANY-DOC-INFO

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

Description This element takes company specific information about a document resp. a subpart of a document.

**Example**

```
<company-doc-info>
  <company-ref company="id0815">msr</company-ref>
  <doc-label>Programmstand</doc-label>
  <private-codes>1.1</private-codes>
  <entity-name>P11.sgm</entity-name>
</company-doc-info>
```

Description Company specific document informations.

### 3.17 COMPANY-DOC-INFOS

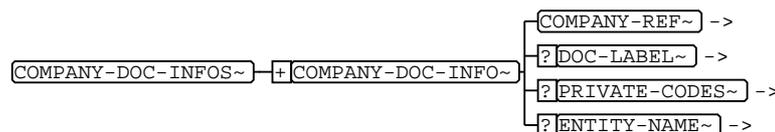


Figure 28: DTD-diagram for COMPANY-DOC-INFOS

Child elements **<company-doc-info>**

parent elements **<admin-data>**

**Table 27: Attributes for COMPANY-DOC-INFOS**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Company-specific information for administrative data

Example

Description Company specific document information.

## 3.18 COMPANY-REF

#PCDATA

**Figure 29: DTD-diagram for COMPANY-REF**

Child elements none

parent elements **<company-doc-info>** **<company-revision-info>**

**Table 28: Attributes for COMPANY-REF**

Name	Type	Class	Value	Remark
[COMPANY]	idref	required		
[HYNAMES]	names	fixed	LINKEND COMPAN- NY	
[HYTIME]	name	fixed	CLINK	
[S]	cdata	implied		

Description Reference to a company. The semantic of the reference is given by the context.

Example

```
<company-revision-info>
  <company-ref company="id0815">msr</company-ref>
  ...
</company-revision-info>
```

Description Reference to a company (supplier).

### 3.19 COMPANY-REVISION-INFO

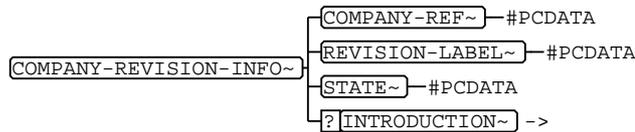


Figure 30: DTD-diagram for COMPANY-REVISION-INFO

Child elements **<company-ref>** **<revision-label>** **<state>** **<introduction>**

parent elements **<company-revision-infos>**

Table 29: Attributes for COMPANY-REVISION-INFO

Name	Type	Class	Value	Remark
[F-CHILD-TYPE]	cdata	fixed	state:selection	
[S]	cdata	implied		

Description Company-specific information concerning a certain revision of the document.

Example 

```
<company-revision-info>
  <company-ref company="rb">rb</company-ref>
  <revision-label>15.4</revision-label>
  <state>freigegeben</state>
</company-revision-info>
```

Description Company specific document revision.

### 3.20 COMPANY-REVISION-INFOS



Figure 31: DTD-diagram for COMPANY-REVISION-INFOS

Child elements **<company-revision-info>**

parent elements **<doc-revision>**

**Table 30: Attributes for COMPANY-REVISION-INFOS**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Collection of all company specific revision information on an entity or a fragment.

Example

Description Company specific document revisions.

## 4 COND ... CYCLE-TIME

### 4.1 COND



Figure 32: DTD-diagram for COND

Child elements `<p>`

parent elements `<prm-char>`

Table 31: Attributes for COND

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Condition for parameters. This condition is given as informal description.

Example

```

<prm>
  <long-name>Temperatur</long-name>
  <short-name>temp</short-name>
  <prm-char>
    <cond><p>valid if x < 20</p></cond>
    <abs>10</abs>
    <tol>5</tol>
    <unit>°C</unit>
  </prm-char>
</prm>
    
```

Description Defines specific conditions under this parameter characteristic is allowed.

### 4.2 CONNECTION-COMP-1

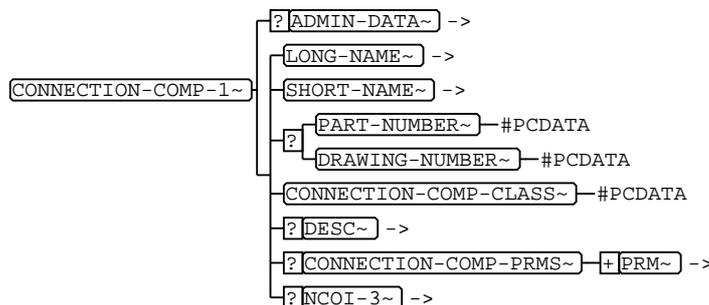


Figure 33: DTD-diagram for CONNECTION-COMP-1

Child elements `<admin-data>` `<long-name>` `<short-name>` `<part-number>` `<drawing-number>` `<connection-comp-class>` `<desc>` `<connection-comp-prms>` `<ncoi-3>`

parent elements <connection-comps-1>

**Table 32: Attributes for CONNECTION-COMP-1**

Name	Type	Class	Value	Remark
[F-CHILD-TYPE]	cdata	fixed	drawing-number:drawing-number#part-number:part-number#connection-comp-class:selection	
[F-ID-CLASS]	name	fixed	CONNECTION-COMP	
[ID]	id	required		
[S]	cdata	implied		

## 4.3 CONNECTION-COMP-CLASS

#PCDATA

**Figure 34: DTD-diagram for CONNECTION-COMP-CLASS**

Child elements none

parent elements <connection-comp-1>

**Table 33: Attributes for CONNECTION-COMP-CLASS**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Spcification of the class of a connection component.

## 4.4 CONNECTION-COMP-PRMS

`CONNECTION-COMP-PRMS~` + `PRM~` ->

Figure 35: DTD-diagram for CONNECTION-COMP-PRMS

Child elements `<prm>`

parent elements `<connection-comp-1>`

Table 34: Attributes for CONNECTION-COMP-PRMS

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description This element describes the parameter of a connection component.

## 4.5 CONNECTION-COMP-REF

`CONNECTION-COMP-REF~` #PCDATA

Figure 36: DTD-diagram for CONNECTION-COMP-REF

Child elements none

parent elements `<segment>` `<segmentation-spec>`

Table 35: Attributes for CONNECTION-COMP-REF

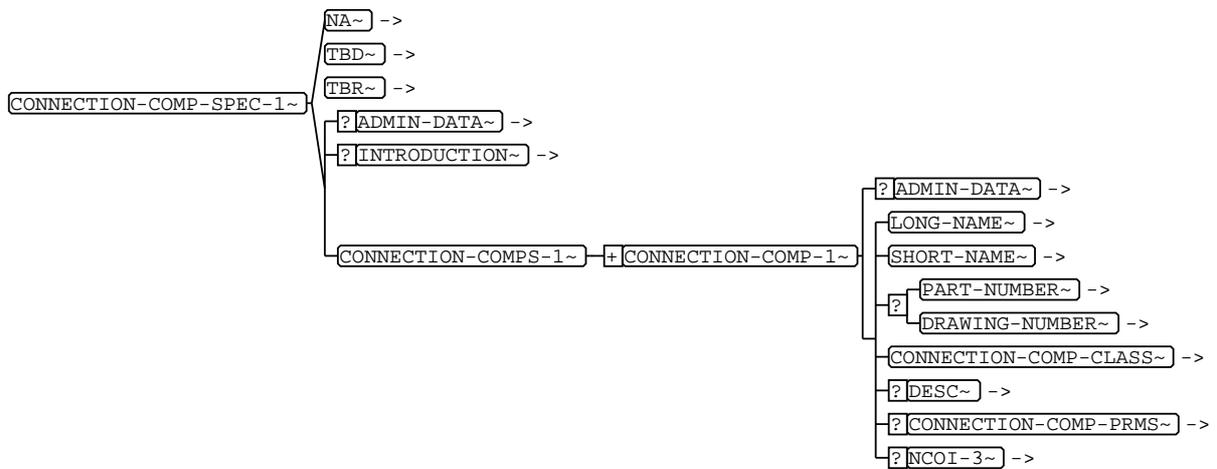
Name	Type	Class	Value	Remark
[CONNECTION-COMP]	idref	required		
[HYNAMES]	names	fixed	LINKEND CONNECTION-COMP	
[HYTIME]	name	fixed	CLINK	

**Table 35 (Cont.): Attributes for CONNECTION-COMP-REF**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Reference to a connection component.

## 4.6 CONNECTION-COMP-SPEC-1



**Figure 37: DTD-diagram for CONNECTION-COMP-SPEC-1**

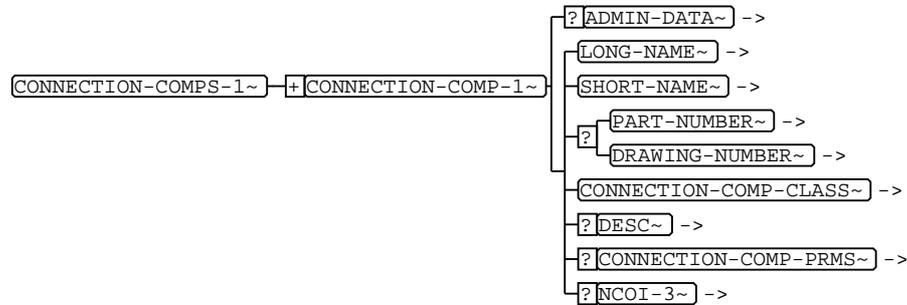
Child elements `<na> <tbd> <tbr> <admin-data> <introduction> <connection-comps-1>`

parent elements `<net-architecture>`

**Table 36: Attributes for CONNECTION-COMP-SPEC-1**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 4.7 CONNECTION-COMPS-1



images/CONNECTION-COMPS-1.bmp

Figure 38: DTD-diagram for CONNECTION-COMPS-1

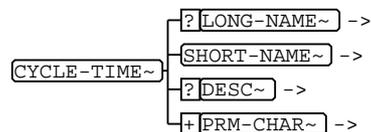
Child elements `<connection-comp-1>`

parent elements `<connection-comp-spec-1>`

Table 37: Attributes for CONNECTION-COMPS-1

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

## 4.8 CYCLE-TIME



images/CYCLE-TIME.bmp

Figure 39: DTD-diagram for CYCLE-TIME

Child elements `<long-name>` `<short-name>` `<desc>` `<prm-char>`

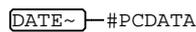
parent elements `<transmission-prms>`

Table 38: Attributes for CYCLE-TIME

Name	Type	Class	Value	Remark
[F-ID-CLASS]	name	fixed	PRM	
[ID]	id	required		
[S]	CDATA	implied		

## 5 DATE ... DRIVER-CONCEPT

### 5.1 DATE



**Figure 40: DTD-diagram for DATE**

Child elements none

parent elements **<doc-revision>** **<schedule>**

**Table 39: Attributes for DATE**

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

Description Date information according to local rules resp. agreed standards. If the DTD is configured multilingual, the date can be specified in multiple languages.

Example `<date>23.11.1998</date>`  
or as an international date  
`<date>1998-11-23</date>`

Description Specifies a date. The specification of the date is only possible in one language.  
- last handling - publishing - creation.

### 5.2 DATE-1



**Figure 41: DTD-diagram for DATE-1**

Child elements none

parent elements **<std>** **<xdoc>**

**Table 40: Attributes for DATE-1**

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

Description Date information according to local rules resp. agreed standards. Even if the DTD is configured multilingual, the date **can not** be specified in multiple languages.

Description With this element it is possible to specify a date in several languages.

## 5.3 DEF

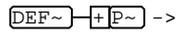


Figure 42: DTD-diagram for DEF

Child elements `<p>`

parent elements `<def-item>`

Table 41: Attributes for DEF

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description This is a element of an definition list

## 5.4 DEF-ITEM

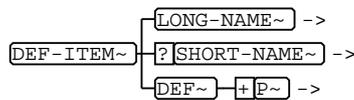


Figure 43: DTD-diagram for DEF-ITEM

Child elements `<long-name>` `<short-name>` `<def>`

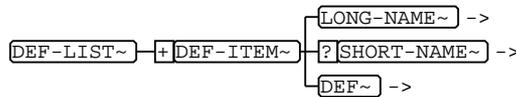
parent elements `<def-list>`

Table 42: Attributes for DEF-ITEM

Name	Type	Class	Value	Remark
[F-ID-CLASS]	name	fixed	DEF-ITEM	
[HELP-ENTRY]	cdata	implied		
[ID]	id	required		
[S]	cdata	implied		

Description Null

## 5.5 DEF-LIST



images/DEF-LIST.bmp

Figure 44: DTD-diagram for DEF-LIST

Child elements `<def-item>`

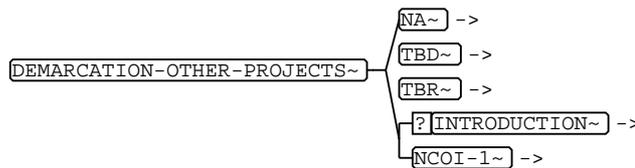
parent elements `<add-info>` `<chapter>` `<driver-concept>` `<entry>` `<introduction>` `<item>` `<labeled-item>` `<ncoi-1>` `<ncoi-3>` `<net-emc-design>` `<net-line-desc>` `<net-message-desc>` `<net-message-layout>` `<remark>` `<segmentation-desc>` `<topic-1>` `<topic-2>`

Table 43: Attributes for DEF-LIST

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description This element allows the user to define a list.

## 5.6 DEMARCATION-OTHER-PROJECTS



images/DEMARCATION-OTHER-PROJECTS.bmp

Figure 45: DTD-diagram for DEMARCATION-OTHER-PROJECTS

Child elements `<na>` `<tbd>` `<tbr>` `<introduction>` `<ncoi-1>`

parent elements `<general-project-data>`

Table 44: Attributes for DEMARCATION-OTHER-PROJECTS

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Informal description of relationship to similar projects.

Description Specifies the demarcation and differences to other projects.

## 5.7 DEPARTMENT

`DEPARTMENT~` — #PCDATA

Figure 46: DTD-diagram for DEPARTMENT

Child elements none

parent elements `<team-member>`

Table 45: Attributes for DEPARTMENT

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Department of the `<team-member>`

Description This element contains the name of the department.

## 5.8 DESC

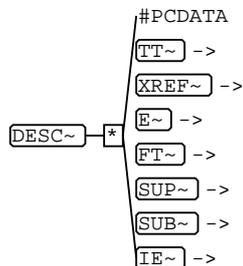


Figure 47: DTD-diagram for DESC

Child elements `<tt>` `<xref>` `<e>` `<ft>` `<sup>` `<sub>` `<ie>`

parent elements `<baudrate>` `<btl-cycles>` `<connection-comp-1>` `<cycle-time>` `<figure>` `<latency-time>` `<net-node-port>` `<overall-project>` `<phase-relations>` `<powerdown-receive-time>` `<powerup-receive-time>` `<powerup-transmit-time>` `<prm>` `<project>` `<sample-point>` `<sample-rate>` `<segment-length>` `<sjw>` `<sync-edge>` `<tbd>`

Table 46: Attributes for DESC

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Informal, concise description of the subject in question. This is usually one or two sentences.

**Example**

```

<sw-variable calibration="no-calibration" f-id-class="sw-variable" f-namespace="sw-variables"
  <long-name>engine temperature</long-name>
  <short-name>tmtot</short-name>
  <desc>The engine temeprature is stored in this variable</desc>
  ...
</sw-variable>

```

Description Short text description of the object.

## 5.9 DIR-HAND-OVER-DOC-DATA

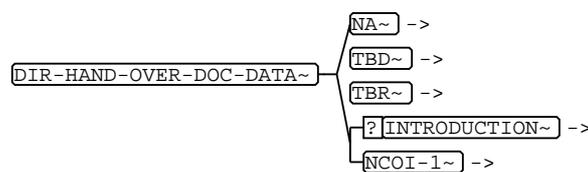


Figure 48: DTD-diagram for DIR-HAND-OVER-DOC-DATA

Child elements **<na>** **<tbd>** **<tbr>** **<introduction>** **<ncoi-1>**

parent elements **<general-project-data>**

Table 47: Attributes for DIR-HAND-OVER-DOC-DATA

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

Description Directory of all documents which are hand-over the project-partner.

## 5.10 DLC

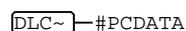


Figure 49: DTD-diagram for DLC

Child elements none

parent elements **<net-message>**

Table 48: Attributes for DLC

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

## 5.11 DOC-LABEL

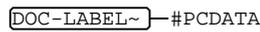


Figure 50: DTD-diagram for DOC-LABEL

Child elements none

parent elements **<company-doc-info>**

Table 49: Attributes for DOC-LABEL

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description This is the label of the document, serving as a company specific title or name of the document.

Example

Description Name of the document

## 5.12 DOC-REVISION

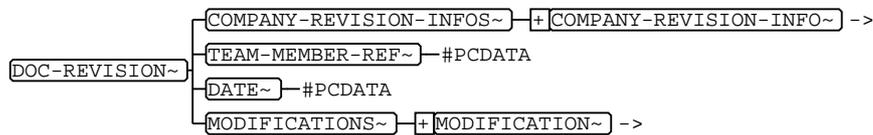


Figure 51: DTD-diagram for DOC-REVISION

Child elements **<company-revision-infos>** **<team-member-ref>** **<date>** **<modifications>**

parent elements **<doc-revisions>**

Table 50: Attributes for DOC-REVISION

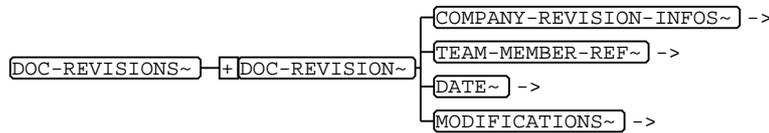
Name	Type	Class	Value	Remark
[F-CHILD-TYPE]	cdata	fixed	date:date	
[S]	cdata	implied		

Description This element gets all information of the document revision in question.

Example

Description This element describes a document revision

## 5.13 DOC-REVISIONS



images/DOC-REVISIONS.bmp

**Figure 52: DTD-diagram for DOC-REVISIONS**

Child elements **<doc-revision>**

parent elements **<admin-data>**

**Table 51: Attributes for DOC-REVISIONS**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description This is the collection of all known revisions of the document thus establishing the revision history. It is highly recommended that the most actual revision is on top.

Description This element describes the document revisions

## 5.14 DRAWING-NUMBER



images/DRAWING-NUMBER.bmp

**Figure 53: DTD-diagram for DRAWING-NUMBER**

Child elements none

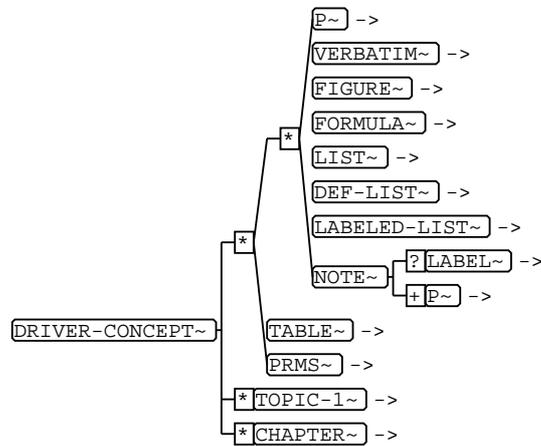
parent elements **<connection-comp-1>**

**Table 52: Attributes for DRAWING-NUMBER**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description This element defines the drawing number.

## 5.15 DRIVER-CONCEPT



images/DRIVER-CONCEPT.bmp

Figure 54: DTD-diagram for DRIVER-CONCEPT

Child elements `<p>` `<verbatim>` `<figure>` `<formula>` `<list>` `<def-list>` `<labeled-list>`  
`<note>` `<table>` `<prms>` `<topic-1>` `<chapter>`

parent elements `<net-interface-spec>`

Table 53: Attributes for DRIVER-CONCEPT

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 6 E ... ERROR-VALUES

### 6.1 E

 #PCDATA

Figure 55: DTD-diagram for E

Child elements none

parent elements <change> <desc> <indent-sample> <item-label> <p> <reason> <tr>

Table 54: Attributes for E

Name	Type	Class	Value	Remark
[S]	cdata	implied		
[TYPE]	nmtkgrp	default	BOLD BOLD ITALIC	

Description Identifies the scope of emphasized information.

### 6.2 EMAIL

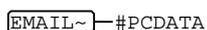
 #PCDATA

Figure 56: DTD-diagram for EMAIL

Child elements none

parent elements <team-member>

Table 55: Attributes for EMAIL

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Definition of the email-address.

## 6.3 ENTITY-NAME

`ENTITY-NAME~` - #PCDATA

Figure 57: DTD-diagram for ENTITY-NAME

Child elements none

parent elements `<company-doc-info>`

Table 56: Attributes for ENTITY-NAME

Name	Type	Class	Value	Remark
[S]	cdat	implied		

Description Filename of the document fragment (if there is one). This is used to divide a document in multiple entities. *SGML tools* do not reflect this (physical) fragmentation on a logical level. Therefore, it must be entered manually here.

Description Filename of the document fragment.

## 6.4 ENTRY

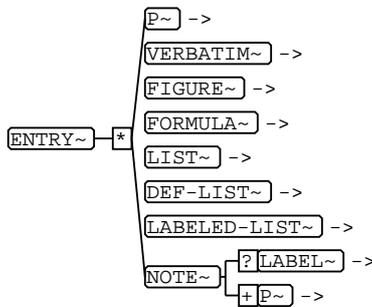


Figure 58: DTD-diagram for ENTRY

Child elements `<p>` `<verbatim>` `<figure>` `<formula>` `<list>` `<def-list>` `<labeled-list>` `<note>`

parent elements `<row>`

**Table 57: Attributes for ENTRY**

Name	Type	Class	Value	Remark
[ALIGN]	nmtkgrp	implied	LEFT RIGHT CENTER JUSTIFY CHAR	
[CHAR]	cdata	implied		
[CHAROFF]	nutoken	implied		
[COLNAME]	nmtoken	implied		
[COLSEP]	number	implied		
[MOREROWS]	number	default	0	
[NAMEEND]	nmtoken	implied		
[NAMEST]	nmtoken	implied		
[ROTATE]	number	default	0	
[ROWSEP]	number	implied		
[S]	cdata	implied		
[SPANNAME]	nmtoken	implied		
[VALIGN]	nmtkgrp	default	TOP TOP BOTTOM MIDDLE	

Description Identifies an entry in a table. Default values come from the <table>, <tgroup>, <colspec>, <spanspec>, <thead>, <tbody> or <row>; attributes. An entry not specified by a <spanspec> get the defaults from its starting column.

## 6.5 ERROR-VALUE



**Figure 59: DTD-diagram for ERROR-VALUE**

Child elements none

parent elements <error-values>

**Table 58: Attributes for ERROR-VALUE**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 6.6 ERROR-VALUES

`ERROR-VALUES~` + `ERROR-VALUE~` #PCDATA

**Figure 60: DTD-diagram for ERROR-VALUES**

Child elements `<error-value>`

parent elements `<net-signal-spec-variant>`

**Table 59: Attributes for ERROR-VALUES**

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

## 7 FAX ... FT

### 7.1 FAX

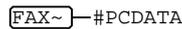
#PCDATA

Figure 61: DTD-diagram for FAX

Child elements none

parent elements <team-member>

Table 60: Attributes for FAX

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Contents the fax number of an address.

### 7.2 FIGURE

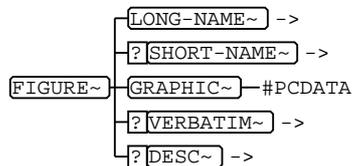


Figure 62: DTD-diagram for FIGURE

Child elements <long-name> <short-name> <graphic> <verbatim> <desc>

parent elements <add-info> <chapter> <driver-concept> <entry> <interface-circuit> <introduction> <item> <labeled-item> <ncoi-1> <ncoi-3> <net-emc-design> <net-line-desc> <net-message-desc> <net-message-layout> <net-topology-spec> <remark> <segmentation-desc> <topic-1> <topic-2>

Table 61: Attributes for FIGURE

Name	Type	Class	Value	Remark
[F-ID-CLASS]	name	fixed	FIGURE	
[FLOAT]	nmtkgrp	implied	FLOAT NO-FLOAT	
[HELP-ENTRY]	cdata	implied		
[ID]	id	required		
[S]	cdata	implied		

Description Graphics can be linked using this element.

Example

Description Identifies a figure in the document.

## 7.3 FILE

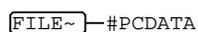


Figure 63: DTD-diagram for FILE

Child elements none

parent elements `<std>` `<xdoc>` `<xfile>`

Table 62: Attributes for FILE

Name	Type	Class	Value	Remark
[FILENAME]	cdata	required		
[NOTATION]	cdata	required		
[S]	cdata	implied		
[TOOL]	cdata	required		
[TOOL-VERSION]	cdata	required		

Description Information on a file name for referencing an external file (e.g. a standard). With respect to the limited capabilities of SGML's entity and notation mechanism this is not used here.

Example `<file filename="agr.bmp" notation="eps" tool="ascet" tool-version="sd"></file>`

Description Definition of a filename (complete path).

## 7.4 FORMULA

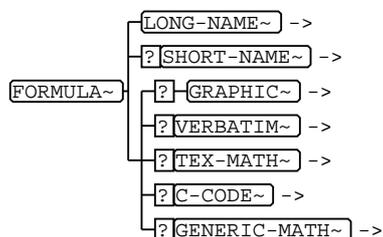


Figure 64: DTD-diagram for FORMULA

Child elements `<long-name>` `<short-name>` `<graphic>` `<verbatim>` `<tex-math>` `<c-code>` `<generic-math>`

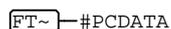
parent elements <add-info> <chapter> <driver-concept> <entry> <introduction>  
 <item> <labeled-item> <ncoi-1> <ncoi-3> <net-emc-design> <net-line-desc> <net-message-desc> <net-message-layout> <remark>  
 <segmentation-desc> <topic-1> <topic-2>

**Table 63: Attributes for FORMULA**

Name	Type	Class	Value	Remark
[F-ID-CLASS]	name	fixed	FORMULA	
[ID]	id	required		
[S]	cdata	implied		

Description Null

## 7.5 FT



**Figure 65: DTD-diagram for FT**

Child elements none

parent elements <change> <desc> <indent-sample> <item-label> <p> <reason> <tbr>

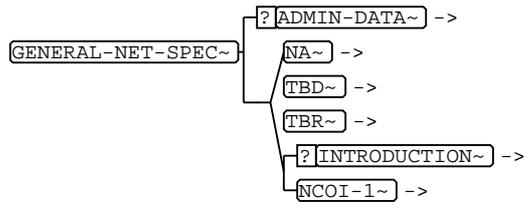
**Table 64: Attributes for FT**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Identifies the body of a footnote in the document.

## 8 GENERAL-NET-SPEC ... GRAPHIC

### 8.1 GENERAL-NET-SPEC



images/GENERAL-NET-SPEC.bmp

Figure 66: DTD-diagram for GENERAL-NET-SPEC

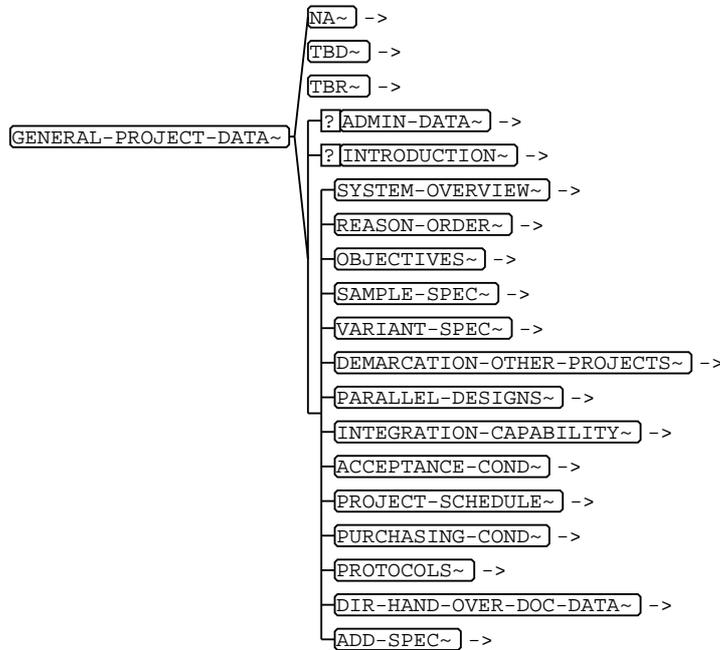
Child elements `<admin-data>` `<na>` `<tbd>` `<tbr>` `<introduction>` `<ncoi-1>`

parent elements `<msrnet>`

Table 65: Attributes for GENERAL-NET-SPEC

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

## 8.2           GENERAL-PROJECT-DATA



images/GENERAL-PROJECT-DATA.bmp

**Figure 67: DTD-diagram for GENERAL-PROJECT-DATA**

Child elements   <na> <tbd> <tbr> <admin-data> <introduction> <system-overview>  
 <reason-order> <objectives> <sample-spec> <variant-spec> <demarcation-  
 other-projects> <parallel-designs> <integration-capability> <acceptance-  
 cond> <project-schedule> <purchasing-cond> <protocols> <dir-  
 hand-over-doc-data> <add-spec>

parent elements <company>

**Table 66: Attributes for GENERAL-PROJECT-DATA**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description   General project data.

Example

Description   Specification of all general project data.

## 8.3 GENERIC-MATH



**Figure 68: DTD-diagram for GENERIC-MATH**

Child elements none

parent elements **<formula>**

**Table 67: Attributes for GENERIC-MATH**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description This element is intended for the definition of semantic math description which can be processed by math processors. Actually there is no recommendation for the language of the formula specification or usage of a special rendering system.

Example

Description Null

## 8.4 GRAPHIC



**Figure 69: DTD-diagram for GRAPHIC**

Child elements none

parent elements **<figure>** **<formula>**

**Table 68: Attributes for GRAPHIC**

Name	Type	Class	Value	Remark
[CATEGORY]	nmtkgrp	implied	BARCODE CON- CEPTUAL EN- GINEERING FLOWCHART GRAPH LO- GO SCHEMATIC WAVEFORM	
[FILENAME]	cdata	required		
[FIT]	number	default	0	
[HEIGHT]	cdata	implied		
[NOTATION]	cdata	required		
[S]	cdata	implied		
[SCALE]	cdata	implied		
[WIDTH]	cdata	implied		

Description The treatment of the graphic is determined by the attributes of **<graphic>**:

Do not enter annotating text to **<long-name>**in**<figure>** or **<table>**(like *Figure 1: ...*). This embellishment is the task of the processing system, not of the author. If the author adds these things, they will be there twice since the *rendition system* will add it again.

**[category]** Denotes the category of the graphic. This information can be used to generate more specific list of figures

**[filename]** Denotes the system filename where the *rendition system* can find the graphic. This is not necessarily the final format. It is up to the *rendition system* to locate the graphic in the company specific environment, to change the file extension to get the appropriate graphic representation.

The type of this attribute can be turned from *SDATA* to *ENTITY* in the DTD file in order to allow *SGML tools* access to the file using its *entity manager*. In this case, the entity name should be chosen in the style of a filename (e.g. *crpctmt.wmf*)<sup>1</sup>.

**[fit]** 0 figure is placed in original size. If it does not fit on the page or the available space, it is scaled down.

1 the figure is scaled up or down to fit the page as possible. This value will be ignored if **[width]** or **[height]** is specified in addition.

2 the figure is rotated counterclockwise by 90° if it is landscape and is wider than the actual text area. It is scaled down to the

<sup>1</sup> This is the way how this document is prepared. It is visible in the sgml source.

	Structure Principles of MSRNET.DTD MSRNET-EADOC  Chapter: GRAPHIC	Page: 77/220 Date: 2002-02-07 State: RD
---	--	---

page size if it does not fit otherwise. This value will be ignored if **[width]** or **[height]** is specified in addition.

3 the figure is always rotated counterclockwise by 90°. If it does not fit on the page it will be scaled down. If **[width]** or **[height]** is specified in addition, the figure will be rotated and then scaled to the specified values.

4 the figure is always rotated counterclockwise by 90° and scaled up or down for best fit on the page. This value will be ignored if **[width]** or **[height]** is specified in addition.

**[height]** If this attribute has a value, the figure will be scaled to the defined height which is a real value with dimensions (e.g. "10cm", "150mm", "12.5in"). If also **[width]** is specified the figure will be distorted. This value always specifies the width of the "figure box" on the page after possible scaling/rotating.

**[notation]** This attribute specifies the format of the graphic file if used by an *SGML Application* supporting notations.

**[scale]** If this attribute receives a value, the figure will be scaled by the given factor which must be a signed real number. Numbers greater 1 increase the size of the figure, values less than 1 make the figure smaller. For example with *scale="0.5"* the a figure of the size 10x10 cm will appear as 5\*5cm.

**[width]** If this attribute has a value, the figure will be scaled to the defined width which is a real value with dimensions (e.g. "10cm", "150mm", "12.5in"). If also **[height]** is specified the figure will be distorted. This value always specifies the width of the "figure box" on the page after possible scaling/rotating.

The scaling attribute precedence is:

- **[scale]** has precedence over all
- **[fit]** has precedence over **[width]** and/or **[height]**

**Example** `<graphic filename="ggub.bmp" notation="eps"></graphic>`

**Description** Identifies a graphic. A graphic is stored in different formats (notation attribute) and is used as an illustration in the document.

## 9 HOMEPAGE ... HOMEPAGE

### 9.1 HOMEPAGE

#PCDATA

**Figure 70: DTD-diagram for HOMEPAGE**

Child elements none

parent elements <team-member>

**Table 69: Attributes for HOMEPAGE**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Homepage of a team member

## 10 IDENTIFIER ... ITEM-LABEL

### 10.1 IDENTIFIER

#PCDATA

Figure 71: DTD-diagram for IDENTIFIER

Child elements none

parent elements <net-message-identifier>

Table 70: Attributes for IDENTIFIER

Name	Type	Class	Value	Remark
[S]	cdata	implied		

### 10.2 IDENTIFIER-BASE-ADDRESS

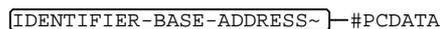
#PCDATA

Figure 72: DTD-diagram for IDENTIFIER-BASE-ADDRESS

Child elements none

parent elements <calc-net-message-identifiers>

Table 71: Attributes for IDENTIFIER-BASE-ADDRESS

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 10.3 IDENTIFIER-MASK

 #PCDATA

Figure 73: DTD-diagram for IDENTIFIER-MASK

Child elements none

parent elements <net-message>

Table 72: Attributes for IDENTIFIER-MASK

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

## 10.4 IDENTIFIER-TYPE

 #PCDATA

Figure 74: DTD-diagram for IDENTIFIER-TYPE

Child elements none

parent elements <net-message>

Table 73: Attributes for IDENTIFIER-TYPE

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

## 10.5 IE

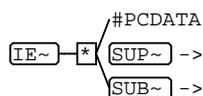
 #PCDATA

Figure 75: DTD-diagram for IE

Child elements <sup> <sub>

parent elements **<change>** **<desc>** **<indent-sample>** **<item-label>** **<long-name>**  
**<long-name-1>** **<p>** **<reason>** **<tbr>**

**Table 74: Attributes for IE**

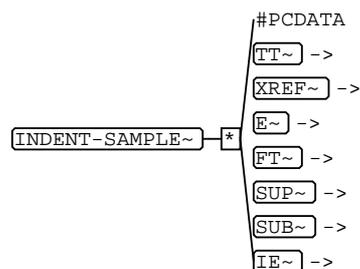
Name	Type	Class	Value	Remark
[S]	cdata	implied		
[TYPE]	cdata	implied		

Description This is an index entry. The contents only appears in the index, not at the location where it is defined. This allows to define slightly different wording for the index than in the text itself.

Example `<p>This is an example of an <ie>index element</ie>index entry`

Description Identifies text of an item to be extracted for the index.

## 10.6 INDENT-SAMPLE



images/INDENT-SAMPLE.bmp

**Figure 76: DTD-diagram for INDENT-SAMPLE**

Child elements **<tt>** **<xref>** **<e>** **<ft>** **<sup>** **<sub>** **<ie>**

parent elements **<labeled-list>**

**Table 75: Attributes for INDENT-SAMPLE**

Name	Type	Class	Value	Remark
[ITEM-LABEL-POS]	nmtkgrp	default	NO-NEWLINE NO-NEWLINE NEWLINE NEWLINE-IF-NECESSARY	
[S]	cdata	implied		

Description Null

## 10.7 INIT-VALUE

`INIT-VALUE~` — #PCDATA

Figure 77: DTD-diagram for INIT-VALUE

Child elements none

parent elements `<net-signal-spec-variant>`

Table 76: Attributes for INIT-VALUE

Name	Type	Class	Value	Remark
[S]	cdata	implied		

images/INIT-VALUE.bmp

## 10.8 INTEGRATION-CAPABILITY

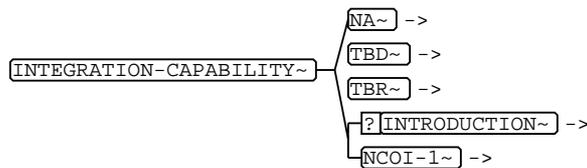


Figure 78: DTD-diagram for INTEGRATION-CAPABILITY

Child elements `<na>` `<tbd>` `<tbr>` `<introduction>` `<ncoi-1>`

parent elements `<general-project-data>`

Table 77: Attributes for INTEGRATION-CAPABILITY

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description This element contains all information about the integration capability of this project.

images/INTEGRATION-CAPABILITY.bmp

## 10.9 INTERFACE-CIRCUIT



images/INTERFACE-CIRCUIT.bmp

**Figure 79: DTD-diagram for INTERFACE-CIRCUIT**

Child elements **<figure>** **<schematic-elements>** **<add-info>**

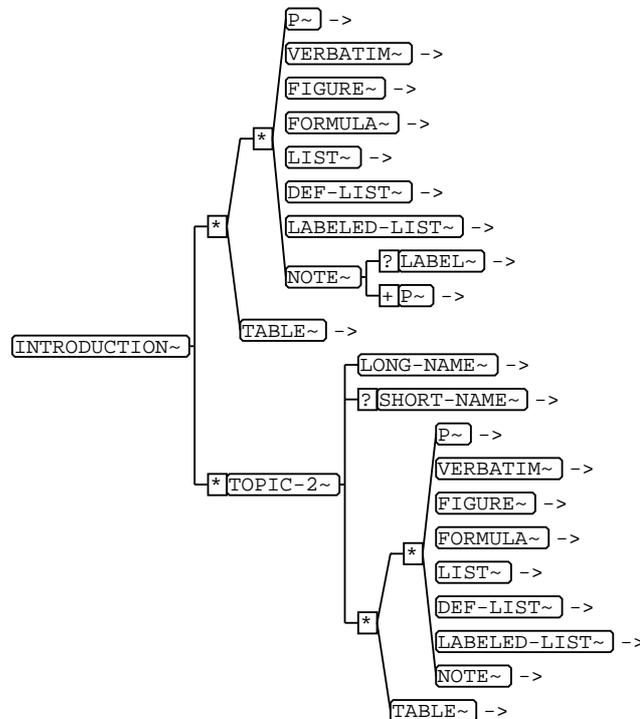
parent elements **<node-variant>**

**Table 78: Attributes for INTERFACE-CIRCUIT**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description This alpha-numeric parameter describes the type of interface circuit.

## 10.10 INTRODUCTION



images/INTRODUCTION.bmp

Figure 80: DTD-diagram for INTRODUCTION

Child elements <p> <verbatim> <figure> <formula> <list> <def-list> <labeled-list> <note> <table> <topic-2>

parent elements <acceptance-cond> <add-spec> <company-revision-info> <connection-comp-spec-1> <demarcation-other-projects> <dir-hand-over-doc-data> <general-net-spec> <general-project-data> <integration-capability> <net-architecture> <net-block-modes> <net-diag-spec> <net-error-handling> <net-init-spec> <net-interface-spec> <net-line-spec> <net-message-spec> <net-mgmt-spec> <net-node-spec> <net-oper-spec> <net-signal-spec> <net-topology-spec> <objectives> <parallel-designs> <project-schedule> <protocols> <purchasing-cond> <reason-order> <sample-spec> <segmentation-spec> <system-overview> <variant-spec>

Table 79: Attributes for INTRODUCTION

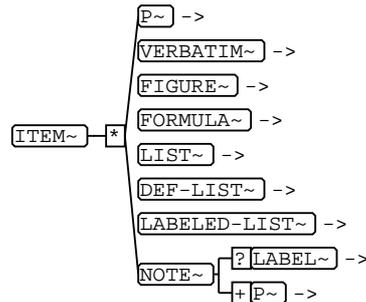
Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description This is used to give a short introduction about the subject in question. It exists at the beginning of its parent element. It is not intended to use <introduction> for a full fledged description.

Example `<introduction>`  
`<p>This system is used to control the engine.</p>`  
`</introduction>`

Description This element can be used to create an introduction.

## 10.11 ITEM



images/ITEM.bmp

Figure 81: DTD-diagram for ITEM

Child elements `<p>` `<verbatim>` `<figure>` `<formula>` `<list>` `<def-list>` `<labeled-list>`  
`<note>`

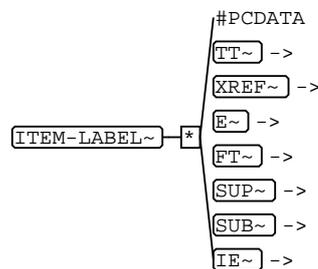
parent elements `<list>`

Table 80: Attributes for ITEM

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

Description Identifies an item typically occurring within a list.

## 10.12 ITEM-LABEL



images/ITEM-LABEL.bmp

Figure 82: DTD-diagram for ITEM-LABEL

Child elements `<tt>` `<xref>` `<e>` `<ft>` `<sup>` `<sub>` `<ie>`

parent elements `<labeled-item>`

**Table 81: Attributes for ITEM-LABEL**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Null

# 11 LABEL ... LONG-NAME-1

## 11.1 LABEL

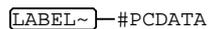
#PCDATA

Figure 83: DTD-diagram for LABEL

Child elements none

parent elements **<multiplex-signal-set>** **<net-node-port>** **<note>** **<overall-project>**  
**<prms>** **<project>** **<schematic-element>**

Table 82: Attributes for LABEL

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

Description Serves as a title (similar to **<long-name>**) for an object that must not, and cannot, be referenced, i.e. possesses no **<short-name>** and no **[id]**.

A **<label>** within **<sw-param-value-block>** is a long designation for the characteristic values of a characteristic values block.

Example

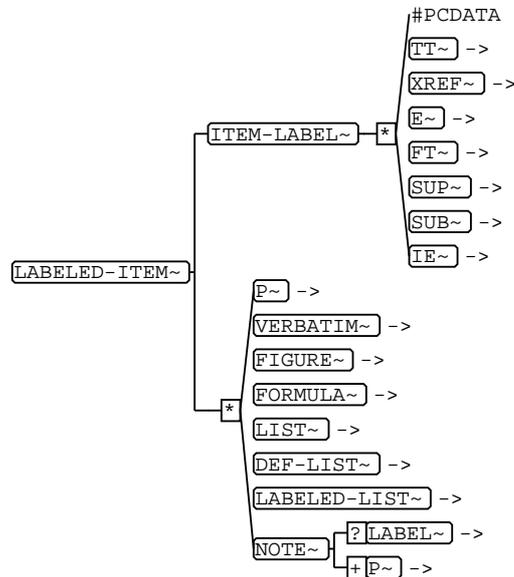
```

<sw-param-value-block>
  <sw-param-axis-values>
    <sw-compu-method-ref sw-compu-method="dez">
      </sw-compu-method-ref>
      <labels>
        <label>sensor rear left</label>
        <label>sensor rear right</label>
        <label>sensor front left</label>
        <label>sensor front right</label>
      </labels>
    </sw-param-axis-values>
    <count>4</count>
  </sw-param-value-block>

```

Description This element contents a short label.

## 11.2 LABELLED-ITEM



images/LABELLED-ITEM.bmp

Figure 84: DTD-diagram for LABELLED-ITEM

Child elements `<item-label>` `<p>` `<verbatim>` `<figure>` `<formula>` `<list>` `<def-list>`  
`<labeled-list>` `<note>`

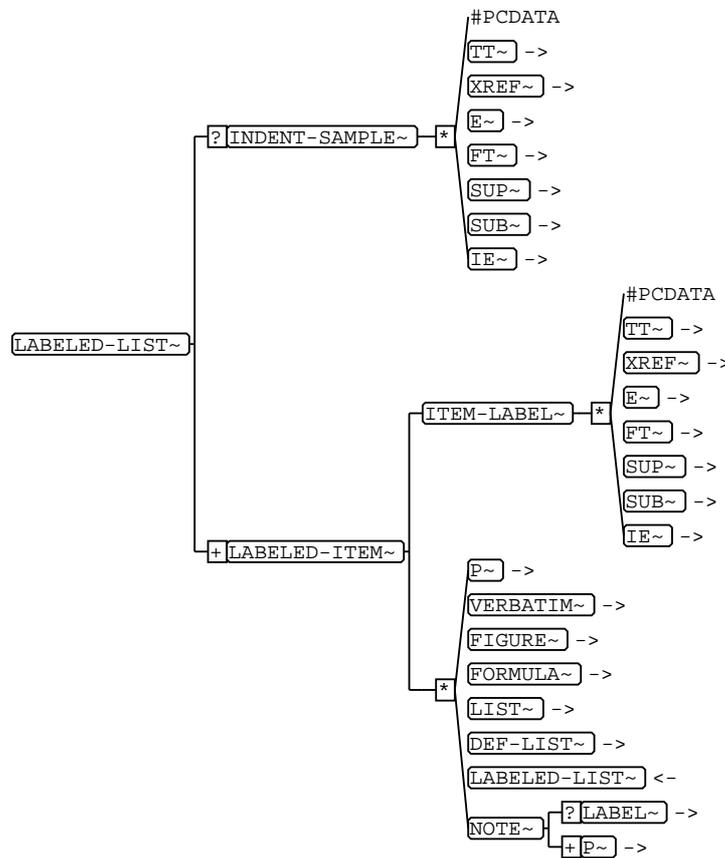
parent elements `<labeled-list>`

Table 83: Attributes for LABELLED-ITEM

Name	Type	Class	Value	Remark
[HELP-ENTRY]	CDATA	implied		
[S]	CDATA	implied		

Description Null

## 11.3 LABELED-LIST



images/LABELED-LIST.bmp

Figure 85: DTD-diagram for LABELED-LIST

Child elements `<indent-sample>` `<labeled-item>`

parent elements `<add-info>` `<chapter>` `<driver-concept>` `<entry>` `<introduction>` `<item>` `<labeled-item>` `<ncoi-1>` `<ncoi-3>` `<net-emc-design>` `<net-line-desc>` `<net-message-desc>` `<net-message-layout>` `<remark>` `<segmentation-desc>` `<topic-1>` `<topic-2>`

Table 84: Attributes for LABELED-LIST

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Null

## 11.4 LANGUAGE



**Figure 86: DTD-diagram for LANGUAGE**

Child elements none

parent elements **<admin-data>**

**Table 85: Attributes for LANGUAGE**

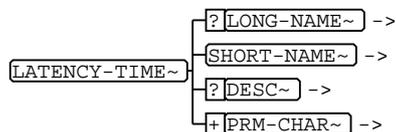
Name	Type	Class	Value	Remark
[S]	CDATA	implied		

Description Identifies the masterlanguage for **<admin-data>**

Example

Description Defines the language of the document (fragment).

## 11.5 LATENCY-TIME



**Figure 87: DTD-diagram for LATENCY-TIME**

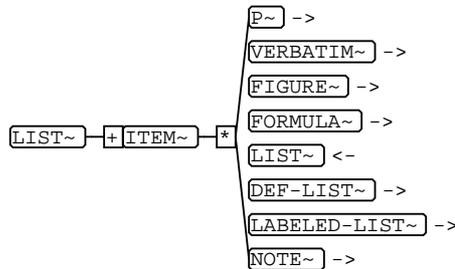
Child elements **<long-name>** **<short-name>** **<desc>** **<prm-char>**

parent elements **<transmission-prms>**

**Table 86: Attributes for LATENCY-TIME**

Name	Type	Class	Value	Remark
[F-ID-CLASS]	name	fixed	PRM	
[ID]	id	required		
[S]	CDATA	implied		

## 11.6 LIST



images/LIST.bmp

Figure 88: DTD-diagram for LIST

Child elements **<item>**

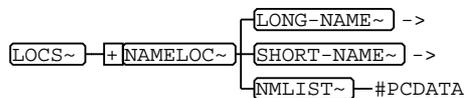
parent elements **<add-info> <chapter> <driver-concept> <entry> <introduction> <item> <labeled-item> <ncoi-1> <ncoi-3> <net-emc-design> <net-line-desc> <net-message-desc> <net-message-layout> <remark> <segmentation-desc> <topic-1> <topic-2>**

Table 87: Attributes for LIST

Name	Type	Class	Value	Remark
[S]	cdata	implied		
[TYPE]	nmtkgrp	required	UNNUMBER NUMBER	

Description Identifies a list which is composed of one or more list items. There are two types of lists, numbered and unnumbered lists. They are classified by the type attribute.

## 11.7 LOCS



images/LOCS.bmp

Figure 89: DTD-diagram for LOCS

Child elements **<nameloc>**

parent elements **<msrnet>**

**Table 88: Attributes for LOCS**

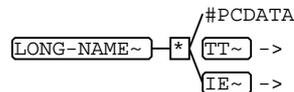
Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description This element is used for cross document/entity referencing (HyTime referencing using namelocs)

Example

Description Null

## 11.8 LONG-NAME



**Figure 90: DTD-diagram for LONG-NAME**

Child elements `<tt>` `<ie>`

parent elements `<baudrate>` `<btl-cycles>` `<chapter>` `<company>` `<connection-comp-1>` `<cycle-time>` `<def-item>` `<figure>` `<formula>` `<latency-time>` `<nameloc>` `<net-line>` `<net-message>` `<net-message-set>` `<net-node>` `<net-node-port>` `<net-signal>` `<net-signal-group>` `<phase-relations>` `<powerdown-receive-time>` `<powerup-receive-time>` `<powerup-transmit-time>` `<prm>` `<sample>` `<sample-point>` `<sample-rate>` `<segment-length>` `<sjw>` `<sw-compu-method>` `<sw-unit>` `<sync-edge>` `<table>` `<team-member>` `<topic-1>` `<topic-2>` `<variant-char>` `<variant-def>`

**Table 89: Attributes for LONG-NAME**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Long designation, e.g. "Engine temperature".

Example

```

<sw-variable id="tmot">
  <long-name>engine temperature</long-name>
  <short-name>tmot</short-name>
  <desc></desc>
  ...
</sw-variable>

```

Description Defines a long name (label, title). This element exists only in elements with identifier.

## 11.9 LONG-NAME-1

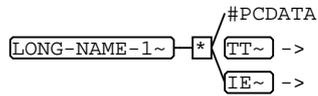


Figure 91: DTD-diagram for LONG-NAME-1

Child elements `<tt>` `<ie>`

parent elements `<std>` `<xdoc>` `<xfile>`

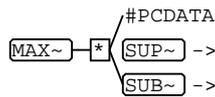
Table 90: Attributes for LONG-NAME-1

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Null

## 12 MAX ... MULTIPLEXOR-VALUE

### 12.1 MAX



images/MAX.bmp

Figure 92: DTD-diagram for MAX

Child elements **<sup>** **<sub>**

parent elements **<prm-char>**

Table 91: Attributes for MAX

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Maximum value of a parameter

Description This element defines the maximum value of a typical range. When you define **<min>** and **<max>** you have to leave **<typ>** empty.

### 12.2 MESSAGE-IDENTIFIER-OFFSET



images/MESSAGE-IDENTIFIER-OFFSET.bmp

Figure 93: DTD-diagram for MESSAGE-IDENTIFIER-OFFSET

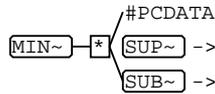
Child elements none

parent elements **<node-variant>**

Table 92: Attributes for MESSAGE-IDENTIFIER-OFFSET

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 12.3 MIN



images/MIN.bmp

Figure 94: DTD-diagram for MIN

Child elements **<sup>** **<sub>**

parent elements **<prm-char>**

Table 93: Attributes for MIN

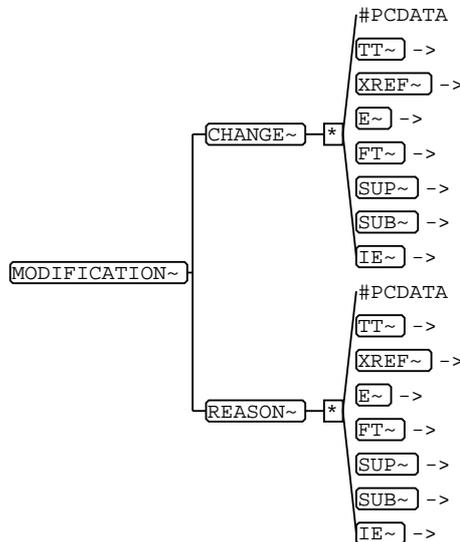
Name	Type	Class	Value	Remark
[S]	CDATA	implied		

Description Minimum value for prm-char

Example

Description Defines the minimum value of a typical range. When you define **<min>** and **<max>** you have to leave **<typ>** empty.

## 12.4 MODIFICATION



images/MODIFICATION.bmp

Figure 95: DTD-diagram for MODIFICATION

Child elements **<change>** **<reason>**

parent elements **<modifications>**

**Table 94: Attributes for MODIFICATION**

Name	Type	Class	Value	Remark
[S]	cdata	implied		
[TYPE]	nmtkgrp	required	CONTENT-RELATED DOC-RELATED	

Description

Example

Description Description of a modification (value before and after the changes, position of change).

## 12.5 MODIFICATIONS



**Figure 96: DTD-diagram for MODIFICATIONS**

Child elements **<modification>**

parent elements **<doc-revision>**

**Table 95: Attributes for MODIFICATIONS**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description

Example

Description This element contains all changes that are made in the document.

## 12.6 MSRNET

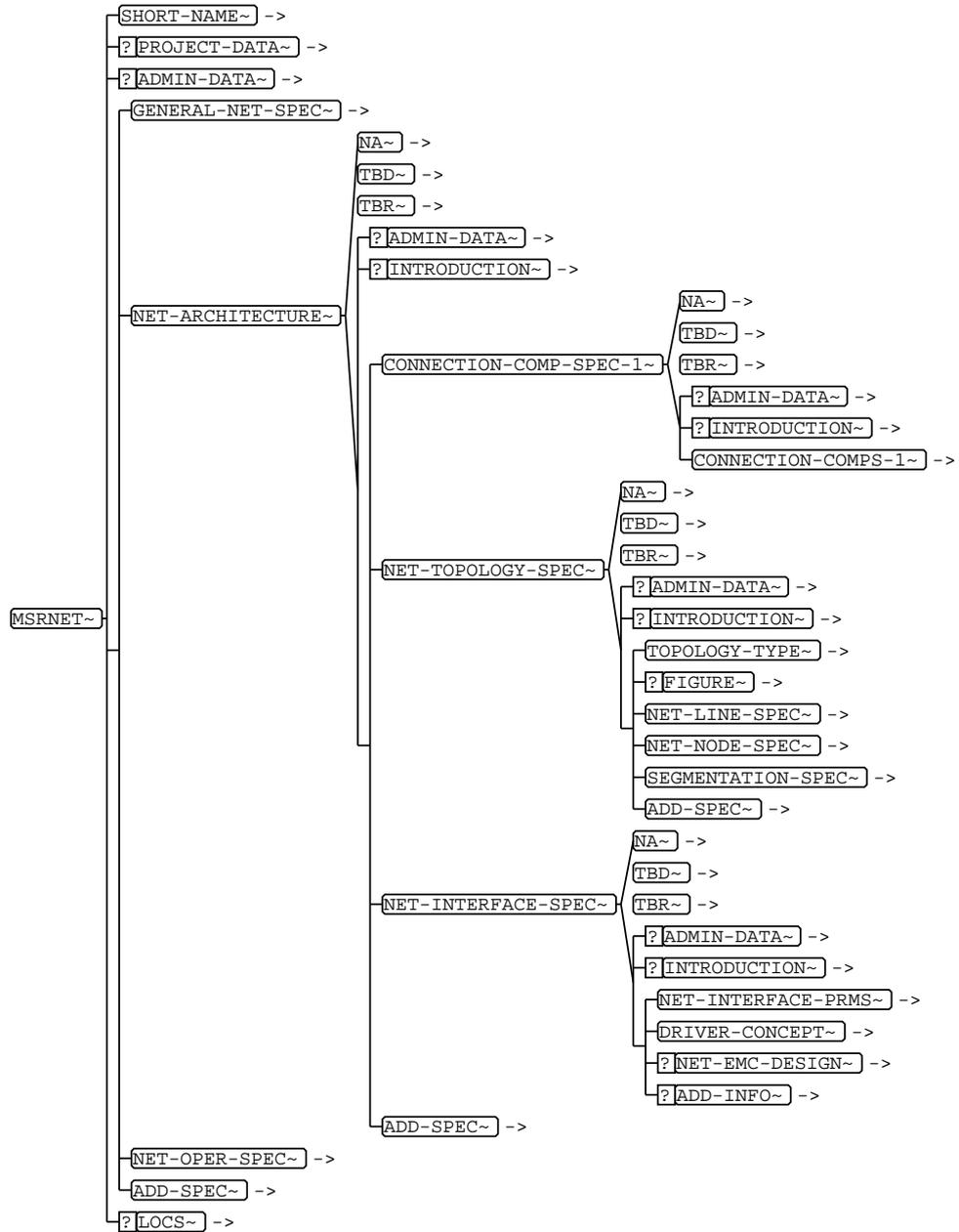


Figure 97: DTD-diagram for MSRNET

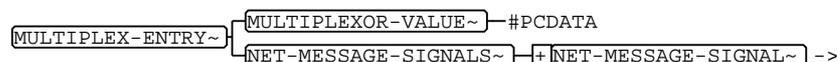
Child elements <short-name> <project-data> <admin-data> <general-net-spec>  
<net-architecture> <net-oper-spec> <add-spec> <locs>

parent elements none

**Table 96: Attributes for MSRNET**

Name	Type	Class	Value	Remark
[F-NAMESPACE]	names	fixed	CHAPTER COMPANY CONNECTION-COMP DEF-ITEM FIGURE FORMULA NET-LINE NET-MESSAGE NET-MESSAGE-SET NET-NODE NET-NODE-PORT NET-SIGNAL NET-SIGNAL-GROUP PRM SAMPLE STD SW-COMPUTER METHOD SW-UNIT TABLE TEAM-MEMBER TOPIC VARIANT-CHAR VARIANT-DEF X-DOC XFILE	
[F-PUBID]	cdata	fixed	-//MSR//DTD MSR NETWORK DTD:V1.1.1:MSRNET.DTD//EN	
[HYTIME]	name	fixed	HYDOC	
[PUBID]	cdata	default	-//MSR//DTD MSR NETWORK DTD:V1.1.1:MSRNET.DTD//EN	
[S]	cdata	implied		

## 12.7 MULTIPLEX-ENTRY



**Figure 98: DTD-diagram for MULTIPLEX-ENTRY**

Child elements **<multiplexor-value>** **<net-message-signals>**

parent elements **<multiplex-signal-list>**

**Table 97: Attributes for MULTIPLEX-ENTRY**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 12.8 MULTIPLEX-SIGNAL-LIST



**Figure 99: DTD-diagram for MULTIPLEX-SIGNAL-LIST**

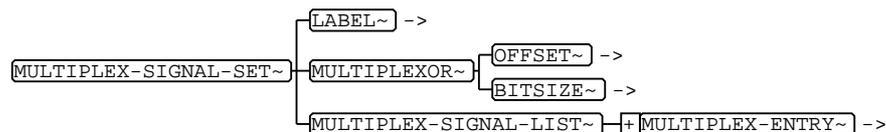
Child elements **<multiplex-entry>**

parent elements **<multiplex-signal-set>**

**Table 98: Attributes for MULTIPLEX-SIGNAL-LIST**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 12.9 MULTIPLEX-SIGNAL-SET



**Figure 100: DTD-diagram for MULTIPLEX-SIGNAL-SET**

Child elements **<label>** **<multiplexor>** **<multiplex-signal-list>**

parent elements **<net-message-signal>**

**Table 99: Attributes for MULTIPLEX-SIGNAL-SET**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 12.10 MULTIPLEXOR

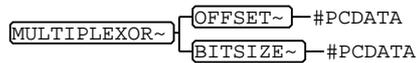


Figure 101: DTD-diagram for MULTIPLEXOR

Child elements `<offset>` `<bitsize>`

parent elements `<multiplex-signal-set>`

Table 100: Attributes for MULTIPLEXOR

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

## 12.11 MULTIPLEXOR-VALUE



Figure 102: DTD-diagram for MULTIPLEXOR-VALUE

Child elements none

parent elements `<multiplex-entry>`

Table 101: Attributes for MULTIPLEXOR-VALUE

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

## 13 NA ... NET-MESSAGE-IDENTIFIERS

### 13.1 NA

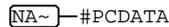


Figure 103: DTD-diagram for NA

Child elements none

parent elements **<acceptance-cond> <add-spec> <connection-comp-spec-1> <demarcation-other-projects> <dir-hand-over-doc-data> <general-net-spec> <general-project-data> <integration-capability> <net-architecture> <net-block-modes> <net-diag-spec> <net-error-handling> <net-init-spec> <net-interface-spec> <net-line-spec> <net-message-spec> <net-mgmt-spec> <net-node-spec> <net-oper-spec> <net-signal-spec> <net-topology-spec> <objectives> <parallel-designs> <project-schedule> <protocols> <purchasing-cond> <reason-order> <sample-spec> <segmentation-spec> <system-overview> <variant-spec>**

Table 102: Attributes for NA

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

Description This element is used instead of sub-structures if certain statements are not relevant ("not applicable").

Example `<sw-param-contents-spec>  
<na></na>  
</sw-param-contents-spec>`

Description Specifies that this information (see parent element) isn't applicable for this project. The context of this element describes the reason why the information isn't applicable.

### 13.2 NAMELOC



Figure 104: DTD-diagram for NAMELOC

Child elements **<long-name> <short-name> <nmlist>**

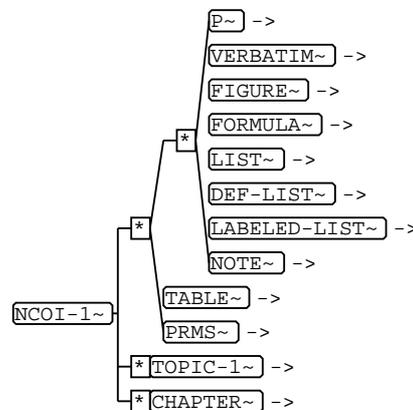
parent elements **<locs>**

**Table 103: Attributes for NAMELOC**

Name	Type	Class	Value	Remark
[HYTIME]	name	fixed	NAMELOC	
[ID]	id	required		
[S]	cdata	implied		

Description Null

## 13.3 NCOI-1



images/NCOI-1.bmp

**Figure 105: DTD-diagram for NCOI-1**

Child elements `<p>` `<verbatim>` `<figure>` `<formula>` `<list>` `<def-list>` `<labeled-list>` `<note>` `<table>` `<prms>` `<topic-1>` `<chapter>`

parent elements `<acceptance-cond>` `<add-spec>` `<demarcation-other-projects>` `<dir-hand-over-doc-data>` `<general-net-spec>` `<integration-capability>` `<net-block-modes>` `<net-diag-spec>` `<net-error-handling>` `<net-init-spec>` `<net-mgmt-spec>` `<objectives>` `<parallel-designs>` `<project-schedule>` `<protocols>` `<purchasing-cond>` `<reason-order>` `<sample>` `<system-overview>`

**Table 104: Attributes for NCOI-1**

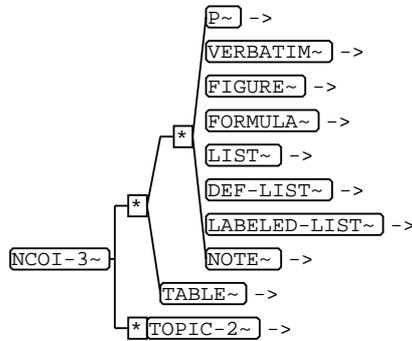
Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description This is a general element that contains informal and non-software-specific structures ("none coded information").

Example

Description This element contents the following objects to define a 'none content orientend information': topics tables figures paragraphs lists Only use these objects when you can't define all your informations in other elements!

## 13.4 NCOI-3



images/NCOI-3.bmp

Figure 106: DTD-diagram for NCOI-3

Child elements `<p>` `<verbatim>` `<figure>` `<formula>` `<list>` `<def-list>` `<labeled-list>`  
`<note>` `<table>` `<topic-2>`

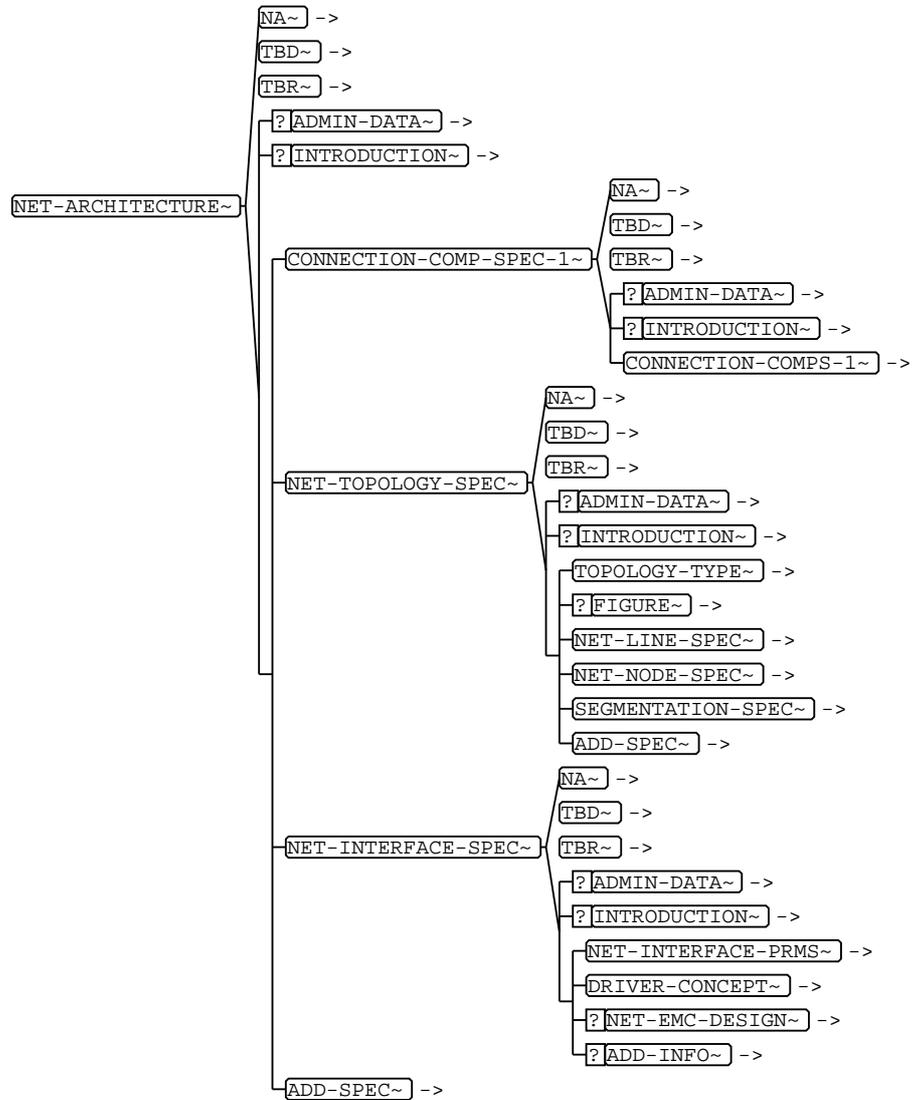
parent elements `<connection-comp-1>`

Table 105: Attributes for NCOI-3

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Null

## 13.5 NET-ARCHITECTURE



images/NET-ARCHITECTURE.bmp

Figure 107: DTD-diagram for NET-ARCHITECTURE

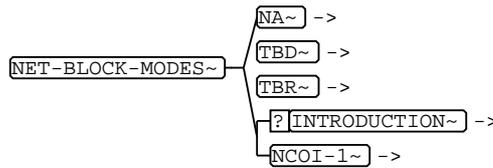
Child elements **<na>** **<tbd>** **<tbr>** **<admin-data>** **<introduction>** **<connection-comp-spec-1>** **<net-topology-spec>** **<net-interface-spec>** **<add-spec>**

parent elements **<msrnet>**

**Table 106: Attributes for NET-ARCHITECTURE**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 13.6 NET-BLOCK-MODES



images/NET-BLOCK-MODES.bmp

**Figure 108: DTD-diagram for NET-BLOCK-MODES**

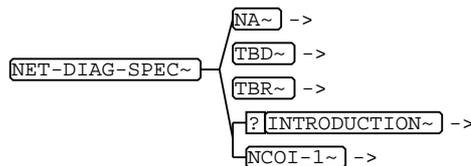
Child elements `<na>` `<tbd>` `<tbr>` `<introduction>` `<ncoi-1>`

parent elements `<net-oper-spec>`

**Table 107: Attributes for NET-BLOCK-MODES**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 13.7 NET-DIAG-SPEC



images/NET-DIAG-SPEC.bmp

**Figure 109: DTD-diagram for NET-DIAG-SPEC**

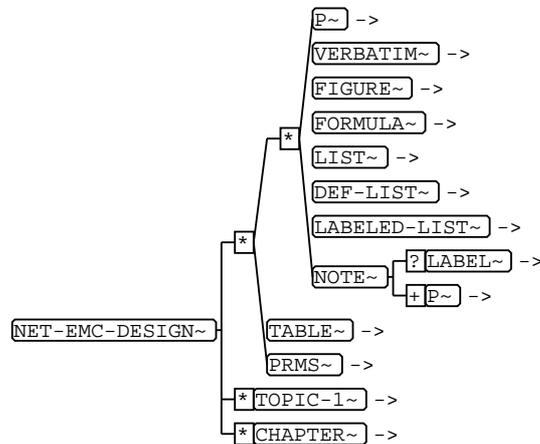
Child elements `<na>` `<tbd>` `<tbr>` `<introduction>` `<ncoi-1>`

parent elements `<net-oper-spec>`

**Table 108: Attributes for NET-DIAG-SPEC**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 13.8 NET-EMC-DESIGN



images/NET-EMC-DESIGN.bmp

Figure 110: DTD-diagram for NET-EMC-DESIGN

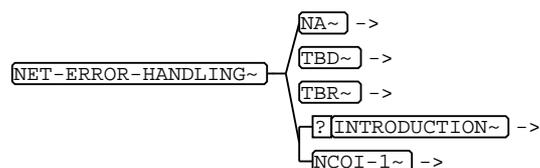
Child elements `<p>` `<verbatim>` `<figure>` `<formula>` `<list>` `<def-list>` `<labeled-list>`  
`<note>` `<table>` `<prms>` `<topic-1>` `<chapter>`

parent elements `<net-interface-spec>`

Table 109: Attributes for NET-EMC-DESIGN

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 13.9 NET-ERROR-HANDLING



images/NET-ERROR-HANDLING.bmp

Figure 111: DTD-diagram for NET-ERROR-HANDLING

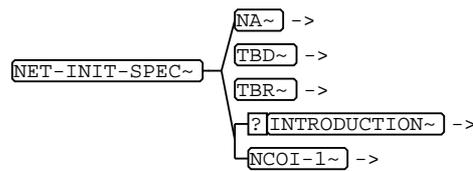
Child elements `<na>` `<tbd>` `<tbr>` `<introduction>` `<ncoi-1>`

parent elements `<net-oper-spec>`

**Table 110: Attributes for NET-ERROR-HANDLING**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 13.10 NET-INIT-SPEC



images/NET-INIT-SPEC.bmp

**Figure 112: DTD-diagram for NET-INIT-SPEC**

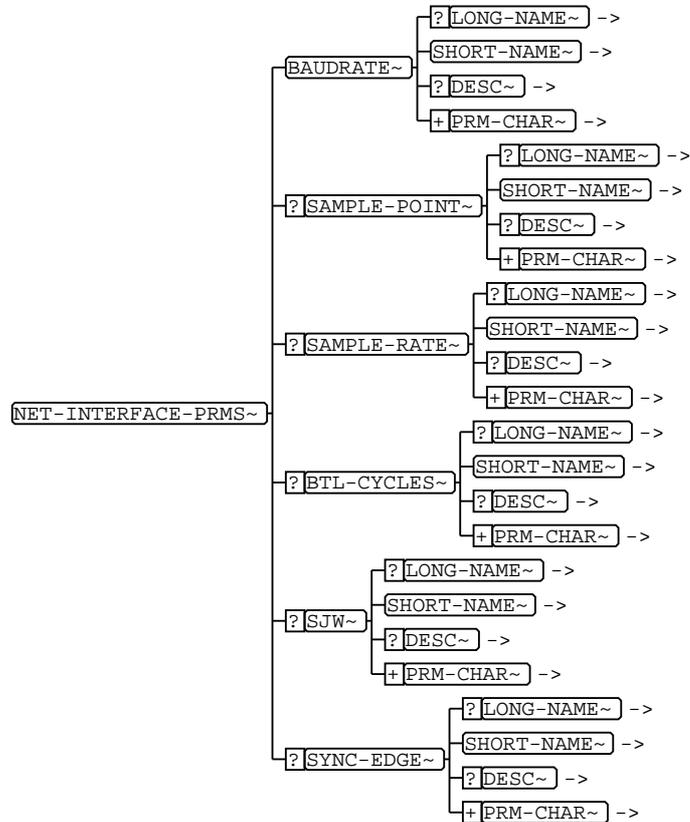
Child elements `<na>` `<tbd>` `<tbr>` `<introduction>` `<ncoi-1>`

parent elements `<net-oper-spec>`

**Table 111: Attributes for NET-INIT-SPEC**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 13.11 NET-INTERFACE-PRMS



images/NET-INTERFACE-PRMS.bmp

Figure 113: DTD-diagram for NET-INTERFACE-PRMS

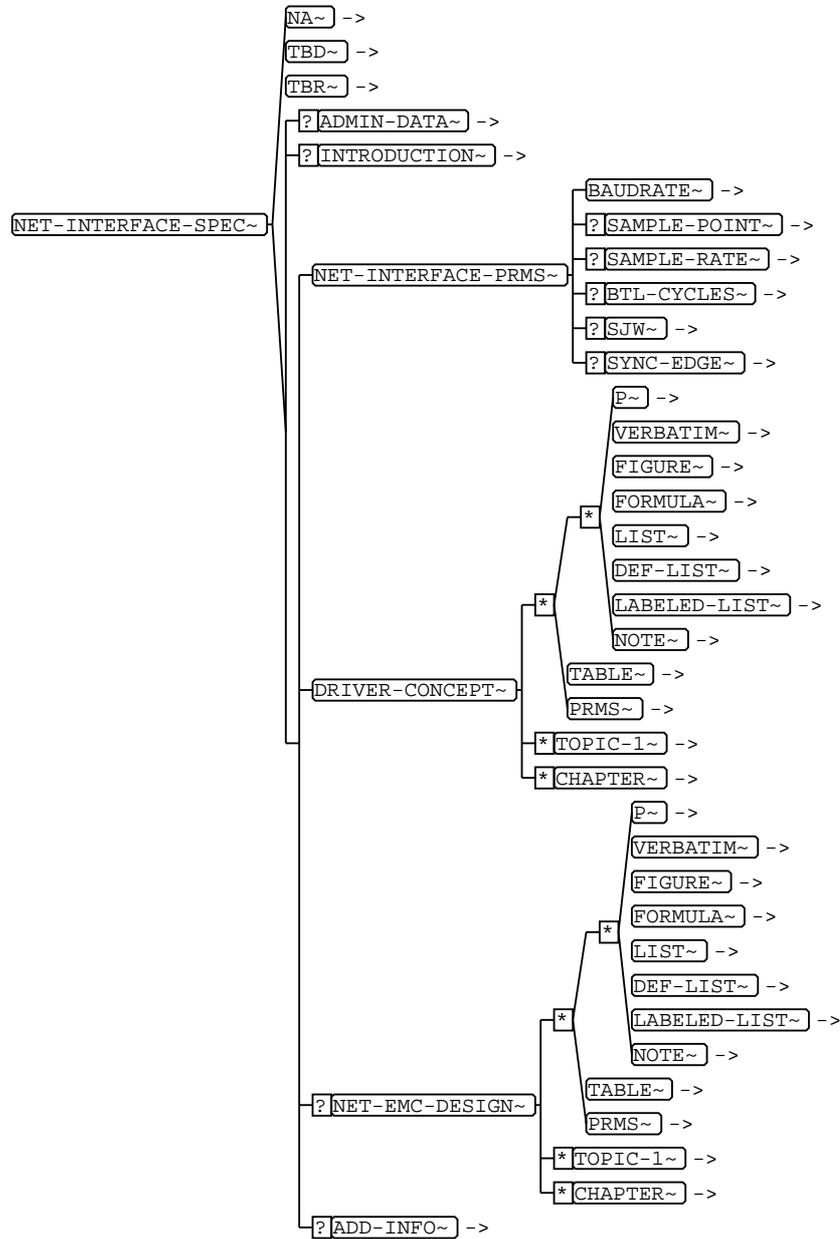
Child elements **<baudrate>** **<sample-point>** **<sample-rate>** **<btl-cycles>** **<sjw>**  
**<sync-edge>**

parent elements **<net-interface-spec>**

Table 112: Attributes for NET-INTERFACE-PRMS

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 13.12 NET-INTERFACE-SPEC



images/NET-INTERFACE-SPEC.bmp

Figure 114: DTD-diagram for NET-INTERFACE-SPEC

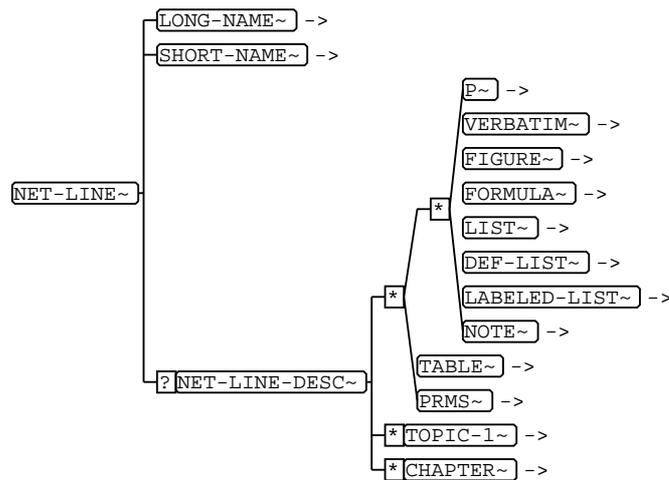
Child elements `<na>` `<tbd>` `<tbr>` `<admin-data>` `<introduction>` `<net-interface-prms>` `<driver-concept>` `<net-emc-design>` `<add-info>`

parent elements `<net-architecture>`

**Table 113: Attributes for NET-INTERFACE-SPEC**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 13.13 NET-LINE



**Figure 115: DTD-diagram for NET-LINE**

Child elements `<long-name>` `<short-name>` `<net-line-desc>`

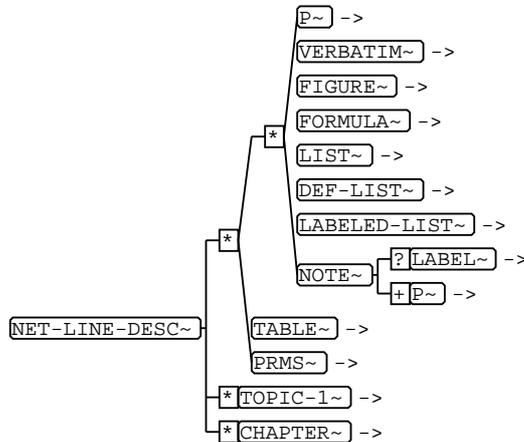
parent elements `<net-lines>`

**Table 114: Attributes for NET-LINE**

Name	Type	Class	Value	Remark
[F-ID-CLASS]	name	fixed	NET-LINE	
[ID]	id	required		
[S]	cdata	implied		

Description Null

## 13.14 NET-LINE-DESC



images/NET-LINE-DESC.bmp

Figure 116: DTD-diagram for NET-LINE-DESC

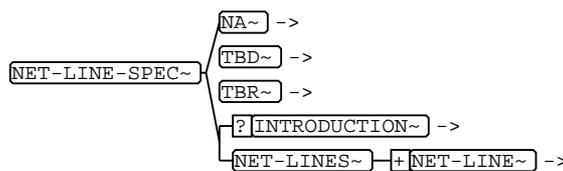
Child elements `<p>` `<verbatim>` `<figure>` `<formula>` `<list>` `<def-list>` `<labeled-list>`  
`<note>` `<table>` `<prms>` `<topic-1>` `<chapter>`

parent elements `<net-line>`

Table 115: Attributes for NET-LINE-DESC

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 13.15 NET-LINE-SPEC



images/NET-LINE-SPEC.bmp

Figure 117: DTD-diagram for NET-LINE-SPEC

Child elements `<na>` `<tbd>` `<tbr>` `<introduction>` `<net-lines>`

parent elements `<net-topology-spec>`

Table 116: Attributes for NET-LINE-SPEC

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 13.16 NET-LINES

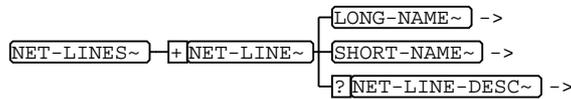


Figure 118: DTD-diagram for NET-LINES

Child elements **<net-line>**

parent elements **<net-line-spec>**

Table 117: Attributes for NET-LINES

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Null

## 13.17 NET-MESSAGE

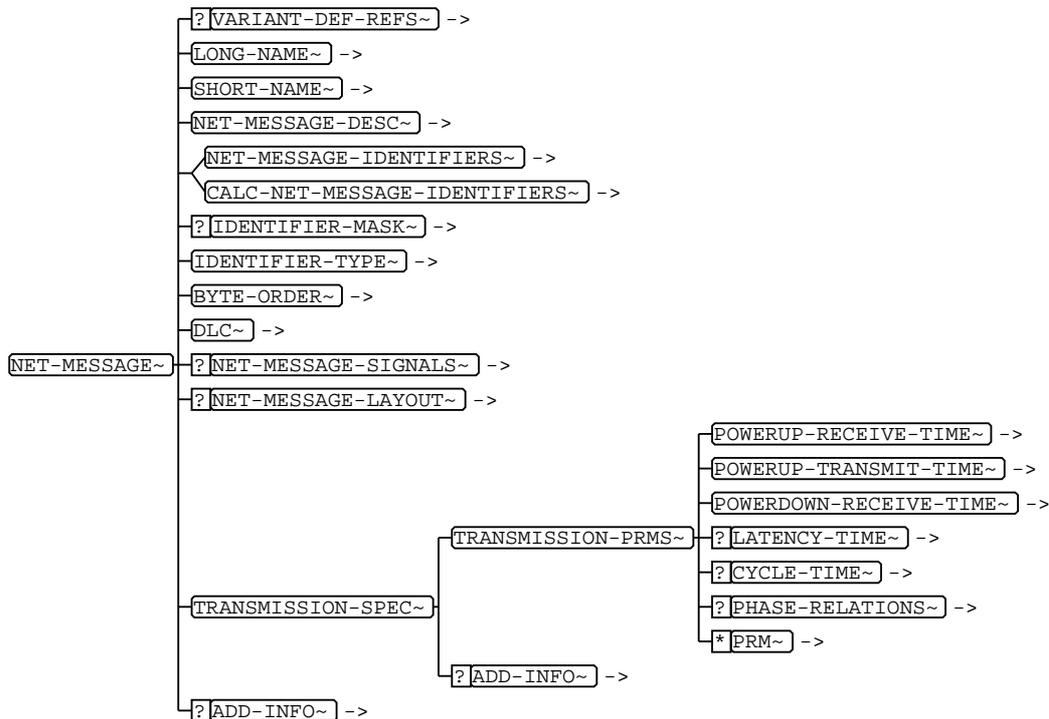


Figure 119: DTD-diagram for NET-MESSAGE

Child elements **<variant-def-refs>** **<long-name>** **<short-name>** **<net-message-desc>** **<net-message-identifiers>** **<calc-net-message-identifiers>**

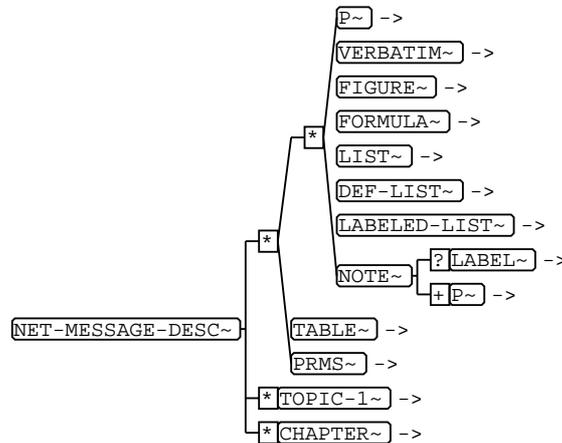
<identifier-mask> <identifier-type> <byte-order> <dlc> <net-message-signals> <net-message-layout> <transmission-spec> <add-info>

parent elements <net-messages>

Table 118: Attributes for NET-MESSAGE

Name	Type	Class	Value	Remark
[F-ID-CLASS]	name	fixed	NET-MESSAGE	
[ID]	id	required		
[S]	cdata	implied		

## 13.18 NET-MESSAGE-DESC



images/NET-MESSAGE-DESC.bmp

Figure 120: DTD-diagram for NET-MESSAGE-DESC

Child elements <p> <verbatim> <figure> <formula> <list> <def-list> <labeled-list> <note> <table> <prms> <topic-1> <chapter>

parent elements <net-message>

Table 119: Attributes for NET-MESSAGE-DESC

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 13.19 NET-MESSAGE-IDENTIFIER

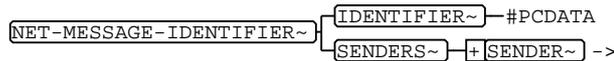


Figure 121: DTD-diagram for NET-MESSAGE-IDENTIFIER

Child elements **<identifier>** **<senders>**

parent elements **<net-message-identifiers>**

Table 120: Attributes for NET-MESSAGE-IDENTIFIER

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 13.20 NET-MESSAGE-IDENTIFIERS



Figure 122: DTD-diagram for NET-MESSAGE-IDENTIFIERS

Child elements **<net-message-identifier>**

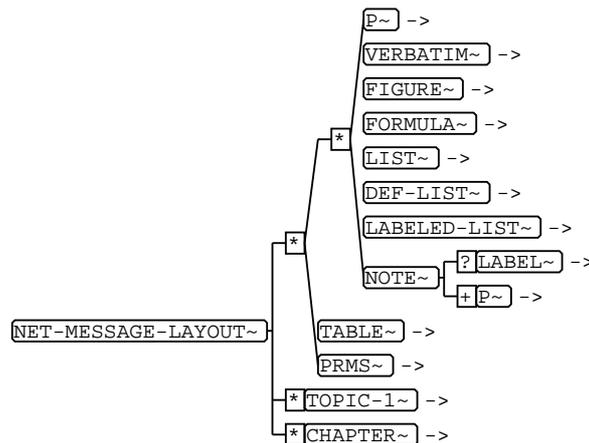
parent elements **<net-message>**

Table 121: Attributes for NET-MESSAGE-IDENTIFIERS

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 14 NET-MESSAGE-LAYOUT ... NET-SIGNAL-CLASS

### 14.1 NET-MESSAGE-LAYOUT



images/NET-MESSAGE-LAYOUT.bmp

Figure 123: DTD-diagram for NET-MESSAGE-LAYOUT

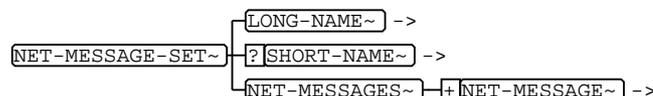
Child elements `<p>` `<verbatim>` `<figure>` `<formula>` `<list>` `<def-list>` `<labeled-list>`  
`<note>` `<table>` `<prms>` `<topic-1>` `<chapter>`

parent elements `<net-message>`

Table 122: Attributes for NET-MESSAGE-LAYOUT

Name	Type	Class	Value	Remark
[S]	cdata	implied		

### 14.2 NET-MESSAGE-SET



images/NET-MESSAGE-SET.bmp

Figure 124: DTD-diagram for NET-MESSAGE-SET

Child elements `<long-name>` `<short-name>` `<net-messages>`

parent elements `<net-message-sets>`

**Table 123: Attributes for NET-MESSAGE-SET**

Name	Type	Class	Value	Remark
[F-ID-CLASS]	name	fixed	NET-MESSAGE-SET	
[ID]	id	required		
[S]	cdata	implied		

## 14.3 NET-MESSAGE-SETS



**Figure 125: DTD-diagram for NET-MESSAGE-SETS**

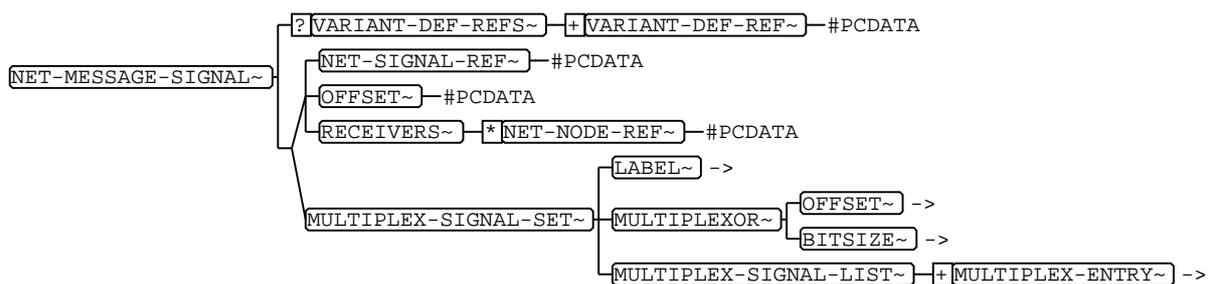
Child elements **<net-message-set>**

parent elements **<net-message-spec>**

**Table 124: Attributes for NET-MESSAGE-SETS**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 14.4 NET-MESSAGE-SIGNAL



**Figure 126: DTD-diagram for NET-MESSAGE-SIGNAL**

Child elements **<variant-def-refs>** **<net-signal-ref>** **<offset>** **<receivers>** **<multiplex-signal-set>**

parent elements **<net-message-signals>**

**Table 125: Attributes for NET-MESSAGE-SIGNAL**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 14.5 NET-MESSAGE-SIGNALS



images/NET-MESSAGE-SIGNALS.bmp

**Figure 127: DTD-diagram for NET-MESSAGE-SIGNALS**

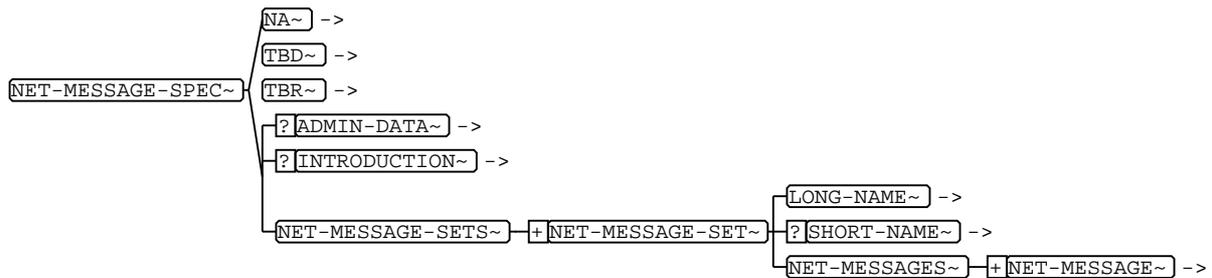
Child elements `<net-message-signal>`

parent elements `<multiplex-entry>` `<net-message>`

**Table 126: Attributes for NET-MESSAGE-SIGNALS**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 14.6 NET-MESSAGE-SPEC



images/NET-MESSAGE-SPEC.bmp

**Figure 128: DTD-diagram for NET-MESSAGE-SPEC**

Child elements `<na>` `<tbd>` `<tbr>` `<admin-data>` `<introduction>` `<net-message-sets>`

parent elements `<net-oper-spec>`

**Table 127: Attributes for NET-MESSAGE-SPEC**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 14.7 NET-MESSAGES

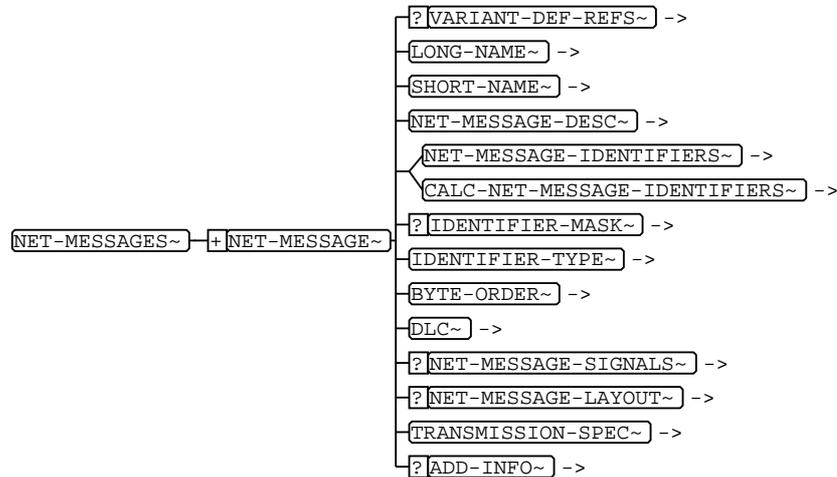


Figure 129: DTD-diagram for NET-MESSAGES

Child elements `<net-message>`

parent elements `<net-message-set>`

Table 128: Attributes for NET-MESSAGES

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 14.8 NET-MGMT-SPEC

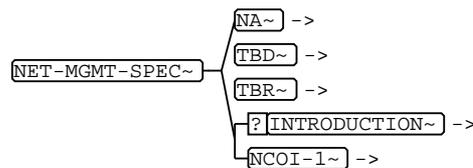


Figure 130: DTD-diagram for NET-MGMT-SPEC

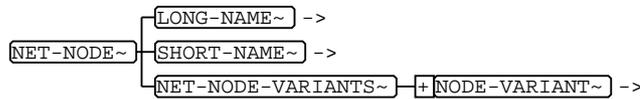
Child elements `<na>` `<tbd>` `<tbr>` `<introduction>` `<ncoi-1>`

parent elements `<net-oper-spec>`

Table 129: Attributes for NET-MGMT-SPEC

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 14.9 NET-NODE



images/NET-NODE.bmp

Figure 131: DTD-diagram for NET-NODE

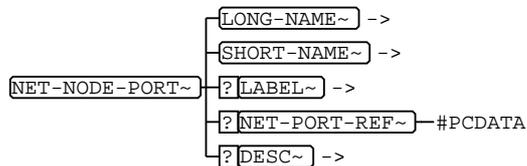
Child elements `<long-name>` `<short-name>` `<net-node-variants>`

parent elements `<net-nodes>`

Table 130: Attributes for NET-NODE

Name	Type	Class	Value	Remark
[F-ID-CLASS]	name	fixed	NET-NODE	
[F-NAMESPACE]	names	fixed	NET-NODE-PORT	
[ID]	id	required		
[S]	cdata	implied		

## 14.10 NET-NODE-PORT



images/NET-NODE-PORT.bmp

Figure 132: DTD-diagram for NET-NODE-PORT

Child elements `<long-name>` `<short-name>` `<label>` `<net-port-ref>` `<desc>`

parent elements `<net-node-ports>`

Table 131: Attributes for NET-NODE-PORT

Name	Type	Class	Value	Remark
[F-ID-CLASS]	name	fixed	NET-NODE-PORT	
[ID]	id	required		
[S]	cdata	implied		

## 14.11 NET-NODE-PORT-REF

`NET-NODE-PORT-REF~` - #PCDATA

Figure 133: DTD-diagram for NET-NODE-PORT-REF

Child elements none

parent elements `<segment-end-nodes>` `<segment-end-nodes>`

Table 132: Attributes for NET-NODE-PORT-REF

Name	Type	Class	Value	Remark
[HYNAMES]	names	fixed	LINKEND NET-NODE-PORT	
[HYTIME]	name	fixed	CLINK	
[NET-NODE-PORT]	idref	required		
[S]	cdata	implied		

## 14.12 NET-NODE-PORTS

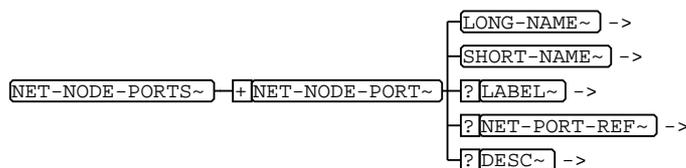


Figure 134: DTD-diagram for NET-NODE-PORTS

Child elements `<net-node-port>`

parent elements `<node-variant>`

Table 133: Attributes for NET-NODE-PORTS

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 14.13 NET-NODE-REF

`NET-NODE-REF~` — #PCDATA

Figure 135: DTD-diagram for NET-NODE-REF

Child elements none

parent elements `<receivers>` `<sender>`

Table 134: Attributes for NET-NODE-REF

Name	Type	Class	Value	Remark
[HYNAMES]	names	fixed	LINKEND NET-NODE	
[HYTIME]	name	fixed	CLINK	
[NET-NODE]	idref	required		
[S]	CDATA	implied		

## 14.14 NET-NODE-SPEC

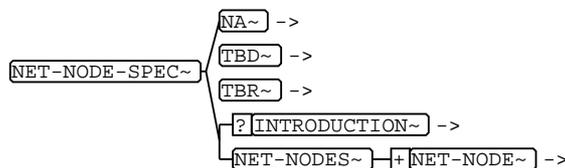


Figure 136: DTD-diagram for NET-NODE-SPEC

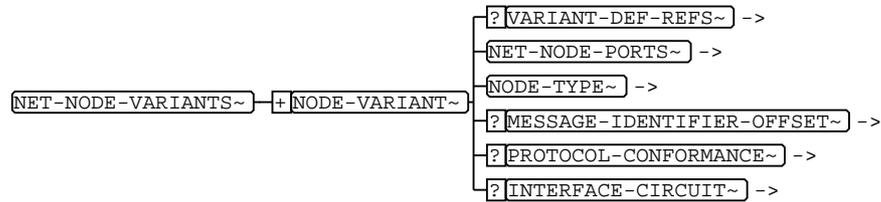
Child elements `<na>` `<tbd>` `<tbr>` `<introduction>` `<net-nodes>`

parent elements `<net-topology-spec>`

Table 135: Attributes for NET-NODE-SPEC

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

## 14.15 NET-NODE-VARIANTS



images/NET-NODE-VARIANTS.bmp

Figure 137: DTD-diagram for NET-NODE-VARIANTS

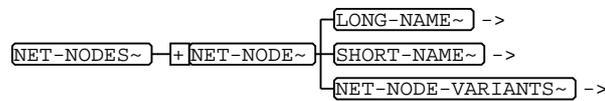
Child elements **<node-variant>**

parent elements **<net-node>**

Table 136: Attributes for NET-NODE-VARIANTS

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 14.16 NET-NODES



images/NET-NODES.bmp

Figure 138: DTD-diagram for NET-NODES

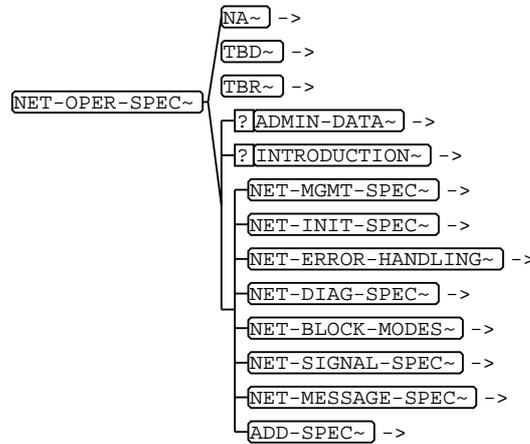
Child elements **<net-node>**

parent elements **<net-node-spec>**

Table 137: Attributes for NET-NODES

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 14.17 NET-OPER-SPEC



images/NET-OPER-SPEC.bmp

Figure 139: DTD-diagram for NET-OPER-SPEC

Child elements `<na>` `<tbd>` `<tbr>` `<admin-data>` `<introduction>` `<net-mgmt-spec>`  
`<net-init-spec>` `<net-error-handling>` `<net-diag-spec>` `<net-block-modes>` `<net-signal-spec>` `<net-message-spec>` `<add-spec>`

parent elements `<msrnet>`

Table 138: Attributes for NET-OPER-SPEC

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 14.18 NET-PORT-REF



images/NET-PORT-REF.bmp

Figure 140: DTD-diagram for NET-PORT-REF

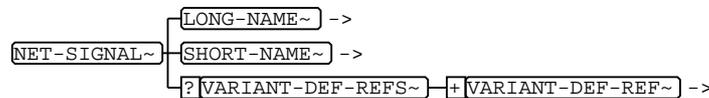
Child elements none

parent elements `<net-node-port>`

**Table 139: Attributes for NET-PORT-REF**

Name	Type	Class	Value	Remark
[HYNAMES]	names	fixed	LINKEND NET-PORT	
[HYTIME]	name	fixed	CLINK	
[NET-PORT]	idref	required		
[S]	cdata	implied		

## 14.19 NET-SIGNAL



images/NET-SIGNAL.bmp

**Figure 141: DTD-diagram for NET-SIGNAL**

Child elements `<long-name>` `<short-name>` `<variant-def-refs>`

parent elements `<net-signals>`

**Table 140: Attributes for NET-SIGNAL**

Name	Type	Class	Value	Remark
[F-ID-CLASS]	name	fixed	NET-SIGNAL	
[ID]	id	required		
[S]	cdata	implied		

## 14.20 NET-SIGNAL-CLASS



images/NET-SIGNAL-CLASS.bmp

**Figure 142: DTD-diagram for NET-SIGNAL-CLASS**

Child elements none

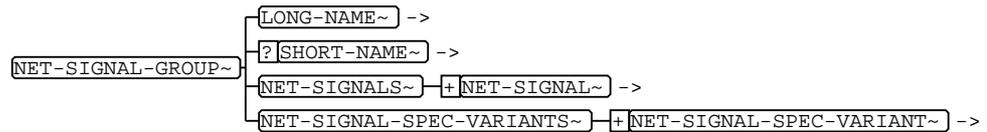
parent elements `<net-signal-spec-variant>`

**Table 141: Attributes for NET-SIGNAL-CLASS**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 15 NET-SIGNAL-GROUP ... NUMBER

### 15.1 NET-SIGNAL-GROUP



images/NET-SIGNAL-GROUP.bmp

Figure 143: DTD-diagram for NET-SIGNAL-GROUP

Child elements `<long-name>` `<short-name>` `<net-signals>` `<net-signal-spec-variants>`

parent elements `<net-signal-groups>`

Table 142: Attributes for NET-SIGNAL-GROUP

Name	Type	Class	Value	Remark
[F-ID-CLASS]	name	fixed	NET-SIGNAL-GROUP	
[ID]	id	required		
[S]	cdata	implied		

### 15.2 NET-SIGNAL-GROUPS



images/NET-SIGNAL-GROUPS.bmp

Figure 144: DTD-diagram for NET-SIGNAL-GROUPS

Child elements `<net-signal-group>`

parent elements `<net-signal-spec>`

Table 143: Attributes for NET-SIGNAL-GROUPS

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 15.3 NET-SIGNAL-REF

`<NET-SIGNAL-REF~>#PCDATA`

Figure 145: DTD-diagram for NET-SIGNAL-REF

Child elements none

parent elements `<net-message-signal>`

Table 144: Attributes for NET-SIGNAL-REF

Name	Type	Class	Value	Remark
[HYNAMES]	names	fixed	LINKEND NET-SIGNAL	
[HYTIME]	name	fixed	CLINK	
[NET-SIGNAL]	idref	required		
[S]	cdata	implied		

## 15.4 NET-SIGNAL-SPEC

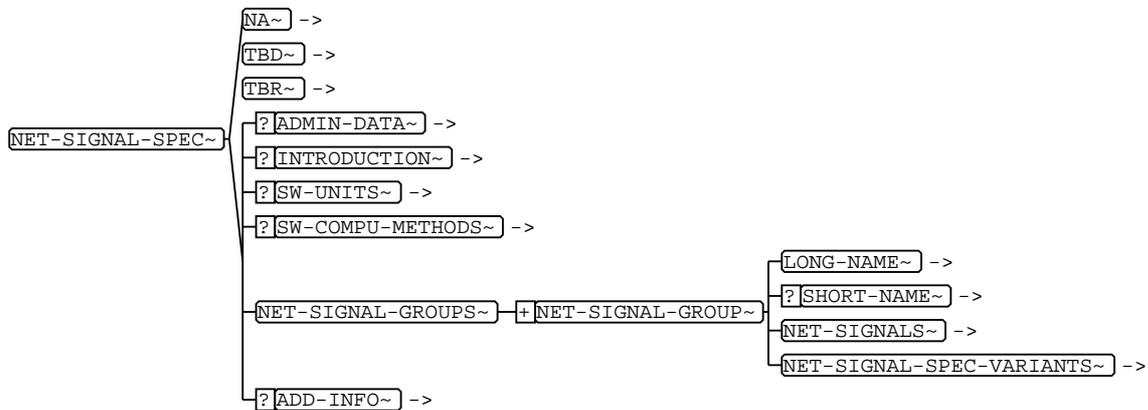


Figure 146: DTD-diagram for NET-SIGNAL-SPEC

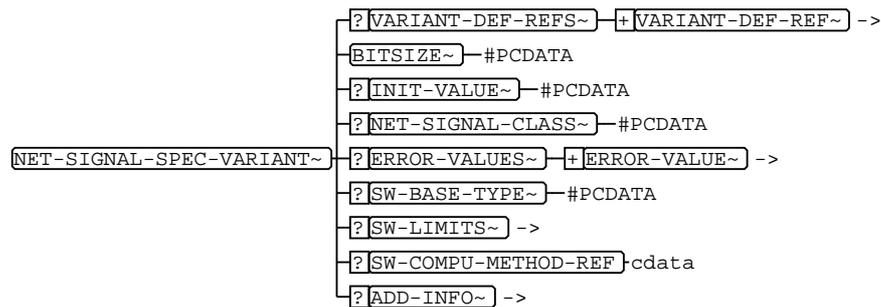
Child elements `<na>` `<tdb>` `<tbr>` `<admin-data>` `<introduction>` `<sw-units>` `<sw-compu-methods>` `<net-signal-groups>` `<add-info>`

parent elements `<net-oper-spec>`

Table 145: Attributes for NET-SIGNAL-SPEC

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 15.5 NET-SIGNAL-SPEC-VARIANT



images/NET-SIGNAL-SPEC-VARIANT.bmp

Figure 147: DTD-diagram for NET-SIGNAL-SPEC-VARIANT

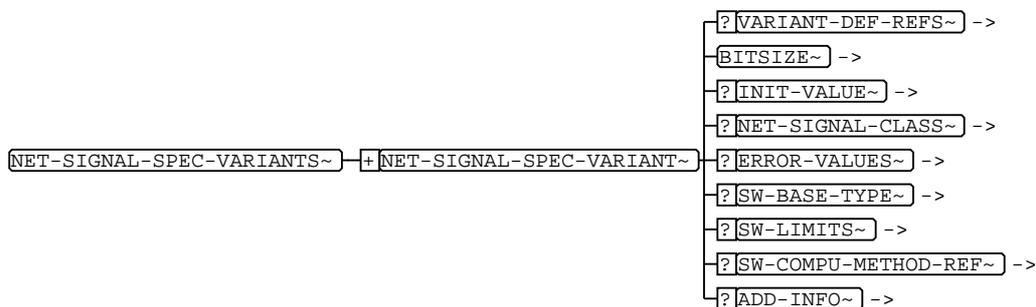
Child elements `<variant-def-refs>` `<bitsize>` `<init-value>` `<net-signal-class>` `<error-values>` `<sw-base-type>` `<sw-limits>` `<sw-compu-method-ref>` `<add-info>`

parent elements `<net-signal-spec-variants>`

Table 146: Attributes for NET-SIGNAL-SPEC-VARIANT

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 15.6 NET-SIGNAL-SPEC-VARIANTS



images/NET-SIGNAL-SPEC-VARIANTS.bmp

Figure 148: DTD-diagram for NET-SIGNAL-SPEC-VARIANTS

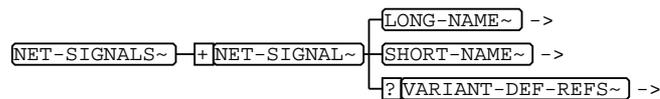
Child elements `<net-signal-spec-variant>`

parent elements `<net-signal-group>`

**Table 147: Attributes for NET-SIGNAL-SPEC-VARIANTS**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 15.7 NET-SIGNALS



images/NET-SIGNALS.bmp

**Figure 149: DTD-diagram for NET-SIGNALS**

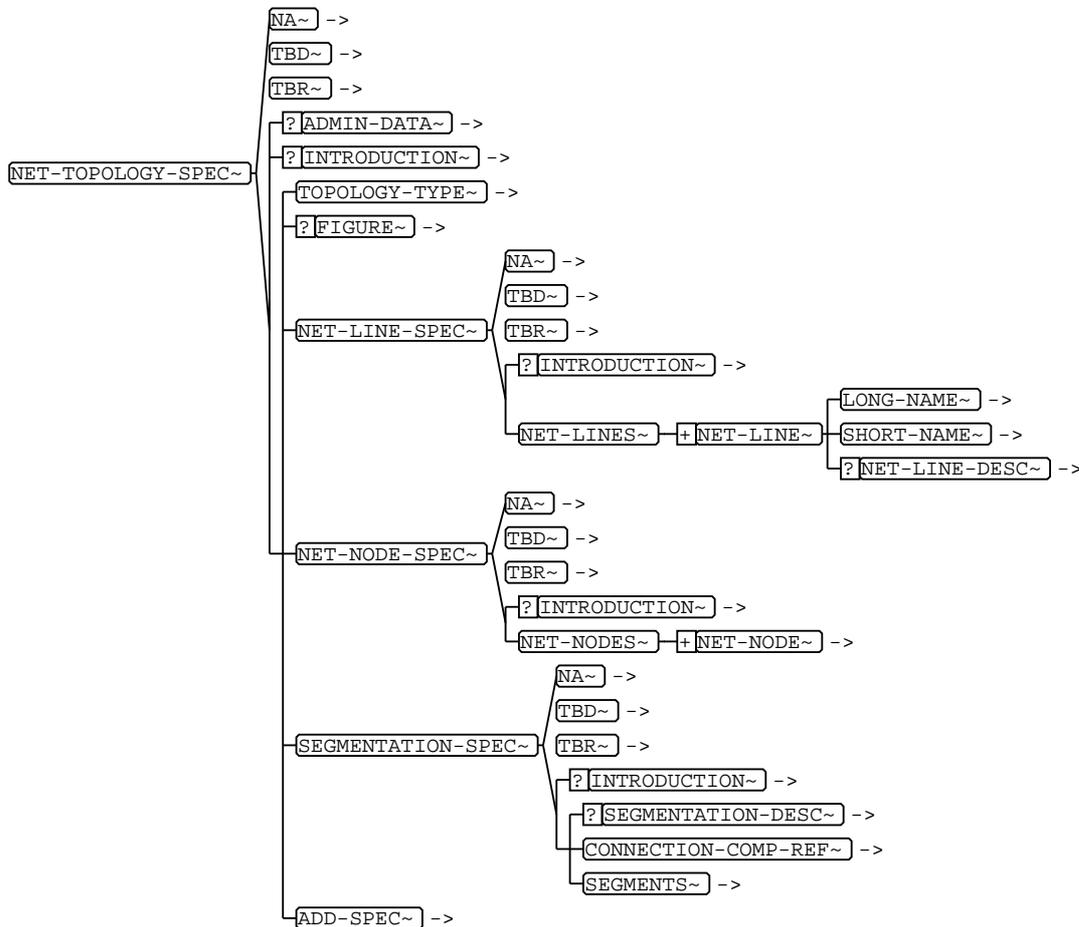
Child elements **<net-signal>**

parent elements **<net-signal-group>**

**Table 148: Attributes for NET-SIGNALS**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 15.8 NET-TOPOLOGY-SPEC



images/NET-TOPOLOGY-SPEC.bmp

Figure 150: DTD-diagram for NET-TOPOLOGY-SPEC

Child elements `<na>` `<tdb>` `<tbr>` `<admin-data>` `<introduction>` `<topology-type>`  
`<figure>` `<net-line-spec>` `<net-node-spec>` `<segmentation-spec>`  
`<add-spec>`

parent elements `<net-architecture>`

Table 149: Attributes for NET-TOPOLOGY-SPEC

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

## 15.9 NMLIST

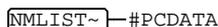
#PCDATA

Figure 151: DTD-diagram for NMLIST

Child elements none

parent elements <nameLoc>

Table 150: Attributes for NMLIST

Name	Type	Class	Value	Remark
[DOCORSUB]	entity	implied		
[HYTIME]	name	fixed	NMLIST	
[NAMETYPE]	nmtgrp	default	ELEMENT ENTITY ELEMENT	
[S]	cdata	implied		

Description Null

## 15.10 NODE-TYPE

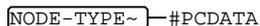
#PCDATA

Figure 152: DTD-diagram for NODE-TYPE

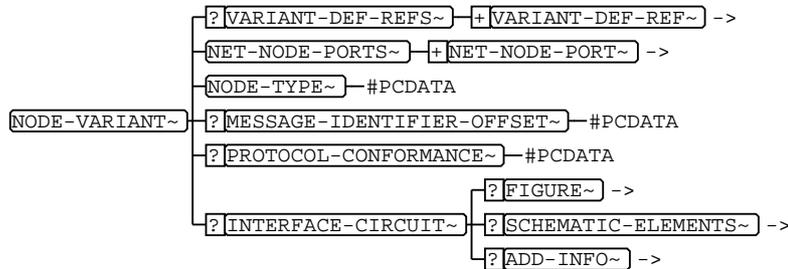
Child elements none

parent elements <node-variant>

Table 151: Attributes for NODE-TYPE

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 15.11 NODE-VARIANT



images/NODE-VARIANT.bmp

Figure 153: DTD-diagram for NODE-VARIANT

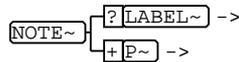
Child elements **<variant-def-refs>** **<net-node-ports>** **<node-type>** **<message-identifier-offset>** **<protocol-conformance>** **<interface-circuit>**

parent elements **<net-node-variants>**

Table 152: Attributes for NODE-VARIANT

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 15.12 NOTE



images/NOTE.bmp

Figure 154: DTD-diagram for NOTE

Child elements **<label>** **<p>**

parent elements **<add-info>** **<chapter>** **<driver-concept>** **<entry>** **<introduction>** **<item>** **<labeled-item>** **<ncoi-1>** **<ncoi-3>** **<net-emc-design>** **<net-line-desc>** **<net-message-desc>** **<net-message-layout>** **<remark>** **<segmentation-desc>** **<topic-1>** **<topic-2>**

Table 153: Attributes for NOTE

Name	Type	Class	Value	Remark
[NOTE-TYPE]	nmtkgrp	required	CAUTION HINT TIP INSTRUCTION EX- ERCISE OTHER	
[S]	cdata	implied		
[USER-DEFINED-TYPE]	cdata	implied		

Description Null

## 15.13 NUMBER

`NUMBER~` — #PCDATA

**Figure 155: DTD-diagram for NUMBER**

Child elements none

parent elements `<xdoc>`

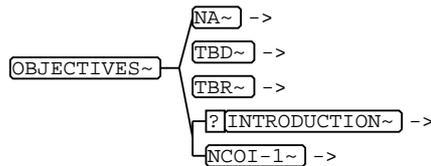
**Table 154: Attributes for NUMBER**

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

Description Definition of a number.

## 16 OBJECTIVES ... OVERALL-PROJECT

### 16.1 OBJECTIVES



images/OBJECTIVES.bmp

Figure 156: DTD-diagram for OBJECTIVES

Child elements `<na>` `<tdb>` `<tbr>` `<introduction>` `<ncoi-1>`

parent elements `<general-project-data>`

Table 155: Attributes for OBJECTIVES

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

Description In this element the objectives of the project can be specified.

### 16.2 OFFSET



images/OFFSET.bmp

Figure 157: DTD-diagram for OFFSET

Child elements none

parent elements `<multiplexor>` `<net-message-signal>`

Table 156: Attributes for OFFSET

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

Description The datapoints are defined by an algorithm for fixed characteristics and maps.  
 Example for an algorithm:  $\text{Datapoint}[i] = (\dots \text{shift}) * x + \text{offset}$

Example

```

<sw-axis-shift-offset>
  <sw-variable-ref>var1</sw-variable-ref>
  <max-count>4</max-count>
  <shift>2</shift>
  <offset>3</offset>
</sw-axis-shift-offset>
    
```

## 16.3 OVERALL-PROJECT



**Figure 158: DTD-diagram for OVERALL-PROJECT**

Child elements **<label>** **<desc>**

parent elements **<project-data>**

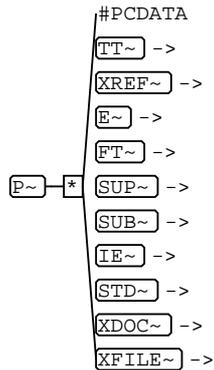
**Table 157: Attributes for OVERALL-PROJECT**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Definition of an overall-project which is assigned to the actual project.

# 17 P ... PROJECT-DATA

## 17.1 P



images/P.bmp

Figure 159: DTD-diagram for P

Child elements `<tt>` `<xref>` `<e>` `<ft>` `<sup>` `<sub>` `<ie>` `<std>` `<xdoc>` `<xfile>`

parent elements `<add-info>` `<chapter>` `<cond>` `<def>` `<driver-concept>` `<entry>` `<introduction>` `<item>` `<labeled-item>` `<ncoi-1>` `<ncoi-3>` `<net-emc-design>` `<net-line-desc>` `<net-message-desc>` `<net-message-layout>` `<note>` `<remark>` `<segmentation-desc>` `<topic-1>` `<topic-2>`

Table 158: Attributes for P

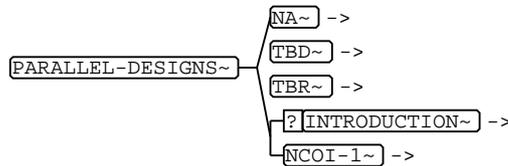
Name	Type	Class	Value	Remark
[HELP-ENTRY]	cdata	implied		
[S]	cdata	implied		

Description Paragraph. A paragraph can comprise text and the elements tt (technical text), xref (cross reference), e (text attribute like bold), ft (footnote), sup (superscript), sub (subscript), ie (index entry), std (standard), xdoc (external document), xfile (external file) in any arbitrary, though not hierarchical, order.

Example `<sw-function-desc>`  
`<p>This function describes the <ie>exhaust-gas return</ie>. Refer to <std> ... </std></p>  
</sw-function-desc>`

Description Identifies text within a paragraph.

## 17.2 PARALLEL-DESIGNS



images/PARALLEL-DESIGNS.bmp

Figure 160: DTD-diagram for PARALLEL-DESIGNS

Child elements `<na>` `<tbd>` `<tbr>` `<introduction>` `<ncoi-1>`

parent elements `<general-project-data>`

Table 159: Attributes for PARALLEL-DESIGNS

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Description of projects with concurrent informations (part type specifications).

## 17.3 PART-NUMBER



images/PART-NUMBER.bmp

Figure 161: DTD-diagram for PART-NUMBER

Child elements none

parent elements `<connection-comp-1>`

Table 160: Attributes for PART-NUMBER

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description This element defines the number of a part.

## 17.4 PHASE-RELATIONS

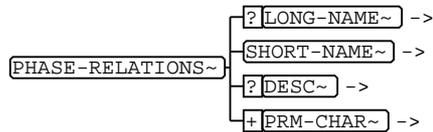


Figure 162: DTD-diagram for PHASE-RELATIONS

Child elements <long-name> <short-name> <desc> <prm-char>

parent elements <transmission-prms>

Table 161: Attributes for PHASE-RELATIONS

Name	Type	Class	Value	Remark
[F-ID-CLASS]	name	fixed	PRM	
[ID]	id	required		
[S]	cdata	implied		

## 17.5 PHONE

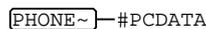


Figure 163: DTD-diagram for PHONE

Child elements none

parent elements <team-member>

Table 162: Attributes for PHONE

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Definition of a phone number.

## 17.6 PHYS

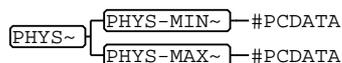


Figure 164: DTD-diagram for PHYS

Child elements <phys-min> <phys-max>

parent elements <sw-limits> <sw-limits>

**Table 163: Attributes for PHYS**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 17.7 PHYS-MAX

#PCDATA

**Figure 165: DTD-diagram for PHYS-MAX**

Child elements none

parent elements <phys>

**Table 164: Attributes for PHYS-MAX**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 17.8 PHYS-MIN

#PCDATA

**Figure 166: DTD-diagram for PHYS-MIN**

Child elements none

parent elements <phys>

**Table 165: Attributes for PHYS-MIN**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 17.9 POSITION

`POSITION~` —#PCDATA

Figure 167: DTD-diagram for POSITION

Child elements none

parent elements `<std>` `<xdoc>`

Table 166: Attributes for POSITION

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

Description Describes the important position in the standard or external document.

## 17.10 POWERDOWN-RECEIVE-TIME

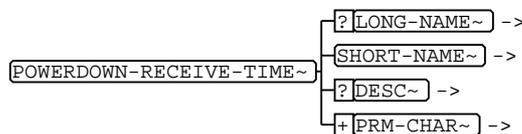


Figure 168: DTD-diagram for POWERDOWN-RECEIVE-TIME

Child elements `<long-name>` `<short-name>` `<desc>` `<prm-char>`

parent elements `<transmission-prms>`

Table 167: Attributes for POWERDOWN-RECEIVE-TIME

Name	Type	Class	Value	Remark
[F-ID-CLASS]	name	fixed	PRM	
[ID]	id	required		
[S]	CDATA	implied		

## 17.11 POWERUP-RECEIVE-TIME

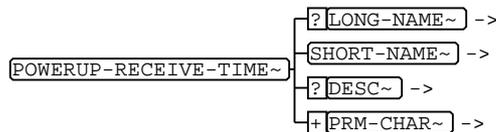


Figure 169: DTD-diagram for POWERUP-RECEIVE-TIME

Child elements `<long-name>` `<short-name>` `<desc>` `<prm-char>`

parent elements `<transmission-prms>`

Table 168: Attributes for POWERUP-RECEIVE-TIME

Name	Type	Class	Value	Remark
[F-ID-CLASS]	name	fixed	PRM	
[ID]	id	required		
[S]	cdata	implied		

## 17.12 POWERUP-TRANSMIT-TIME

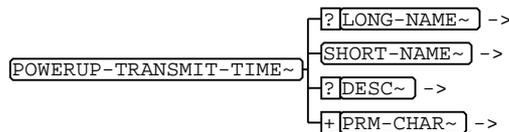


Figure 170: DTD-diagram for POWERUP-TRANSMIT-TIME

Child elements `<long-name>` `<short-name>` `<desc>` `<prm-char>`

parent elements `<transmission-prms>`

Table 169: Attributes for POWERUP-TRANSMIT-TIME

Name	Type	Class	Value	Remark
[F-ID-CLASS]	name	fixed	PRM	
[ID]	id	required		
[S]	cdata	implied		

## 17.13 PRIVATE-CODE

`PRIVATE-CODE~` — #PCDATA

Figure 171: DTD-diagram for PRIVATE-CODE

Child elements none

parent elements `<private-codes>`

Table 170: Attributes for PRIVATE-CODE

Name	Type	Class	Value	Remark
[S]	CDATA	implied		
[TYPE]	CDATA	implied		

Description

Example `<private-codes>`  
`<private-code TYPE="generated_by_ASCET-SD">$generated_by_ASCET-SD:2.2.0$ </private-code>`  
`<private-code TYPE="Implementation xy">Implementation xy</private-code>`  
`</private-codes>`

Description This element allows you to interchange one private (encoded) data.

## 17.14 PRIVATE-CODES

`PRIVATE-CODES~` — + `PRIVATE-CODE~` — #PCDATA

Figure 172: DTD-diagram for PRIVATE-CODES

Child elements `<private-code>`

parent elements `<company-doc-info>`

Table 171: Attributes for PRIVATE-CODES

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

Description

Example `<company-doc-Infos>`  
`<private-codes>`  
`<private-code TYPE="generated_by_ASCET-SD">$generated_by_ASCET-SD:2.2.0$ </private-codes>`

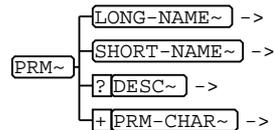
```

</private-codes>
</company-doc-infos>

```

Description This element allows you to interchange private (encoded) data.

## 17.15 PRM



images/PRM.bmp

Figure 173: DTD-diagram for PRM

Child elements **<long-name>** **<short-name>** **<desc>** **<prm-char>**

parent elements **<connection-comp-prms>** **<prms>** **<transmission-prms>**

Table 172: Attributes for PRM

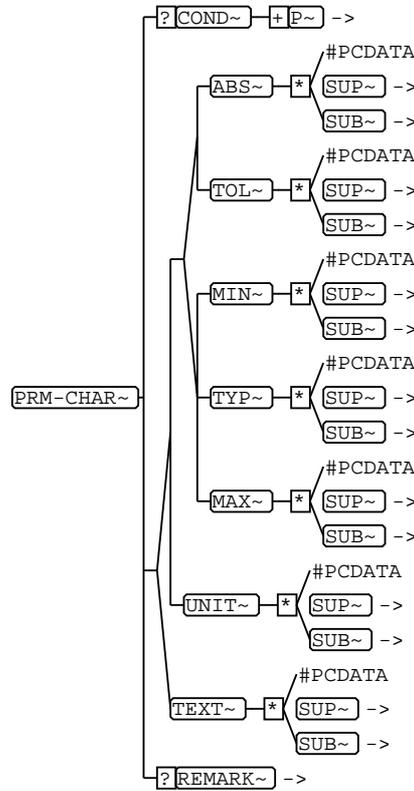
Name	Type	Class	Value	Remark
[F-ID-CLASS]	name	fixed	PRM	
[ID]	id	required		
[S]	cdata	implied		

Description A parameter model has been implemented in MSR. There are 2 possibilities given. A parameter can be specified either by defining **<abs>**, **<tol>** or by defining **<min>**, **<typ>** and **<max>**.

Example

Description Definition of a numeric or alphanumeric (without **<operator>**, **<unit>** and **<tolerance>**) parameter.

## 17.16 PRM-CHAR



images/PRM-CHAR.bmp

Figure 174: DTD-diagram for PRM-CHAR

Child elements `<cond>` `<abs>` `<tol>` `<min>` `<typ>` `<max>` `<unit>` `<text>` `<remark>`

parent elements `<baudrate>` `<btl-cycles>` `<cycle-time>` `<latency-time>` `<phase-relations>` `<powerdown-receive-time>` `<powerup-receive-time>` `<powerup-transmit-time>` `<prm>` `<sample-point>` `<sample-rate>` `<segment-length>` `<sjw>` `<sync-edge>`

Table 173: Attributes for PRM-CHAR

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Description of the parameter characteristics of a parameter

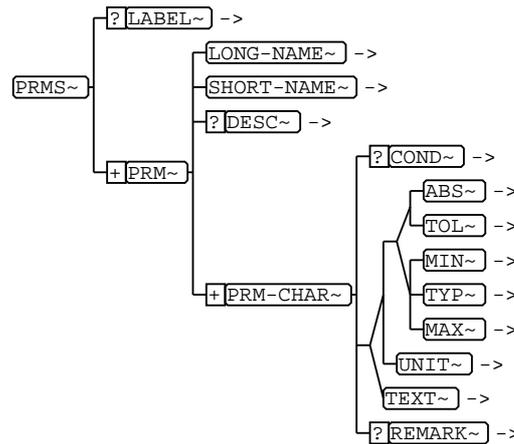
Example

```

<sw-prm>
  <long-name>long designation</long-name>
  <short-name>short designation</short-name>
  <min>10</min>
  <typ>45</typ>
  <max>90</max>
  <unit>°C</unit>
</sw-prm>
  
```

Description A parameter consists of one or more characteristics. Each characteristic groups an <operator>, <value>, <unit>, <tolerance> and <cond>. Since it is possible to define a range with two parameter characteristics.

## 17.17 PRMS



images/PRMS.bmp

Figure 175: DTD-diagram for PRMS

Child elements <label> <prm>

parent elements <add-info> <chapter> <driver-concept> <ncoi-1> <net-emc-design> <net-line-desc> <net-message-desc> <net-message-layout> <segmentation-desc> <topic-1>

Table 174: Attributes for PRMS

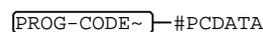
Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description List of parameters

Example

Description Groups one or more parameters to a parameter table.

## 17.18 PROG-CODE



images/PROG-CODE.bmp

Figure 176: DTD-diagram for PROG-CODE

Child elements none

parent elements <sw-compu-method>

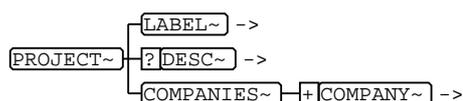
**Table 175: Attributes for PROG-CODE**

Name	Type	Class	Value	Remark
[LANG-SUBSET]	names	implied		
[PROG-LANG]	cdata	implied		
[S]	cdata	implied		
[USED-LIBS]	nmtokens	implied		

Description Description of conversion formulae in a programming language notation

Example

## 17.19 PROJECT



images/PROJECT.bmp

**Figure 177: DTD-diagram for PROJECT**

Child elements <label> <desc> <companies>

parent elements <project-data>

**Table 176: Attributes for PROJECT**

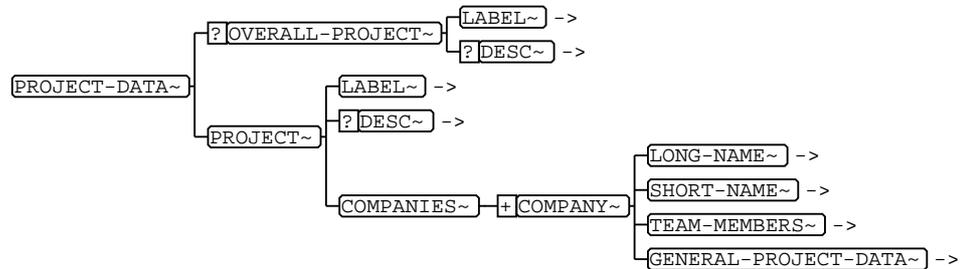
Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Information regarding a project.

Example

Description This element defines the project with all companies.

## 17.20 PROJECT-DATA



images/PROJECT-DATA.bmp

Figure 178: DTD-diagram for PROJECT-DATA

Child elements **<overall-project>** **<project>**

parent elements **<msrnet>**

Table 177: Attributes for PROJECT-DATA

Name	Type	Class	Value	Remark
[S]	cdata	implied		

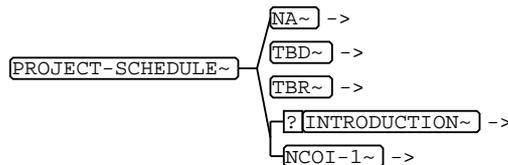
Description Project data

Example

Description For project synchronisation between manufacturer and supplier it is necessary, to interchange some project data. Normally are this data filled from the PDM system of the company.

# 18            **PROJECT-SCHEDULE ... PURCHASING-COND**

## 18.1          **PROJECT-SCHEDULE**



images/PROJECT-SCHEDULE.bmp

**Figure 179: DTD-diagram for PROJECT-SCHEDULE**

Child elements    **<na> <tbd> <tbr> <introduction> <ncoi-1>**

parent elements **<general-project-data>**

**Table 178: Attributes for PROJECT-SCHEDULE**

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

Description This element contains a project schedule.

## 18.2          **PROTOCOL-CONFORMANCE**



images/PROTOCOL-CONFORMANCE.bmp

**Figure 180: DTD-diagram for PROTOCOL-CONFORMANCE**

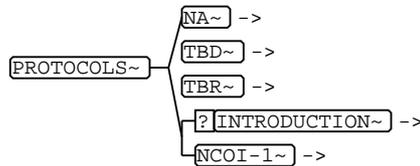
Child elements    **none**

parent elements **<node-variant>**

**Table 179: Attributes for PROTOCOL-CONFORMANCE**

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

## 18.3 PROTOCOLS



images/PROTOCOLS.bmp

Figure 181: DTD-diagram for PROTOCOLS

Child elements `<na>` `<tbd>` `<tbr>` `<introduction>` `<ncoi-1>`

parent elements `<general-project-data>`

Table 180: Attributes for PROTOCOLS

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

Description This element contains all protocols (from the actual company) of this project.

## 18.4 PUBLISHER



images/PUBLISHER.bmp

Figure 182: DTD-diagram for PUBLISHER

Child elements none

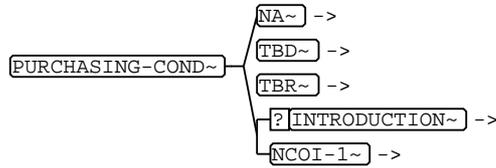
parent elements `<xdoc>`

Table 181: Attributes for PUBLISHER

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

Description Definition of the publisher of the external document.

## 18.5 PURCHASING-COND



images/PURCHASING-COND.bmp

**Figure 183: DTD-diagram for PURCHASING-COND**

Child elements `<na>` `<tbd>` `<tbr>` `<introduction>` `<ncoi-1>`

parent elements `<general-project-data>`

**Table 182: Attributes for PURCHASING-COND**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description This element groups existing purchasing conditions.

## 19 REASON ... ROW

### 19.1 REASON

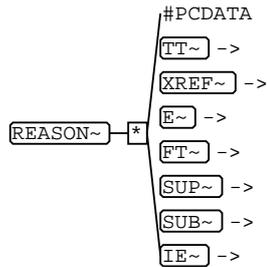


Figure 184: DTD-diagram for REASON

Child elements `<tt>` `<xref>` `<e>` `<ft>` `<sup>` `<sub>` `<ie>`

parent elements `<modification>`

Table 183: Attributes for REASON

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

Description

Example

Description Reason of the change.

### 19.2 REASON-ORDER

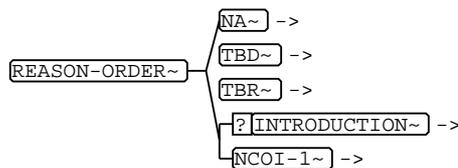


Figure 185: DTD-diagram for REASON-ORDER

Child elements `<na>` `<tbd>` `<tbr>` `<introduction>` `<ncoi-1>`

parent elements `<general-project-data>`

**Table 184: Attributes for REASON-ORDER**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Reason of the order.

## 19.3 RECEIVERS

`RECEIVERS~` \* `NET-NODE-REF~` #PCDATA

**Figure 186: DTD-diagram for RECEIVERS**

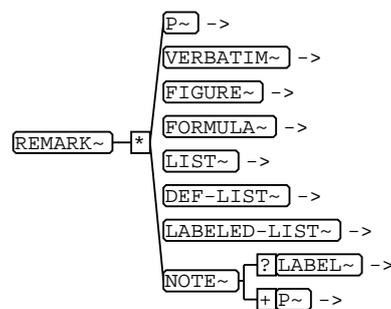
Child elements `<net-node-ref>`

parent elements `<net-message-signal>`

**Table 185: Attributes for RECEIVERS**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 19.4 REMARK



**Figure 187: DTD-diagram for REMARK**

Child elements `<p>` `<verbatim>` `<figure>` `<formula>` `<list>` `<def-list>` `<labeled-list>` `<note>`

parent elements `<prm-char>`

**Table 186: Attributes for REMARK**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Defines a remark.

## 19.5 REVISION-LABEL

#PCDATA

**Figure 188: DTD-diagram for REVISION-LABEL**

Child elements none

parent elements <company-revision-info>

**Table 187: Attributes for REVISION-LABEL**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

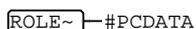
Description Revision

Example 

```
<company-revision-info>
  <company-ref></company-ref>
  <revision-label>10.4</revision-label>
  <state></state>
</company-revision-info>
```

Description Label of a revision.

## 19.6 ROLE

#PCDATA

**Figure 189: DTD-diagram for ROLE**

Child elements none

parent elements <roles>

**Table 188: Attributes for ROLE**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Definition of a team member role (e.g. project leader).

## 19.7 ROLES



**Figure 190: DTD-diagram for ROLES**

Child elements **<role>**

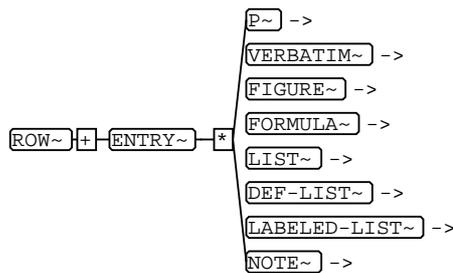
parent elements **<team-member>**

**Table 189: Attributes for ROLES**

Name	Type	Class	Value	Remark
[F-CHILD-TYPE]	cdata	fixed	role:selection	
[S]	cdata	implied		

Description Each team member has one or more roles in the project.

## 19.8 ROW



**Figure 191: DTD-diagram for ROW**

Child elements **<entry>**

parent elements **<tbody> <tfoot> <thead>**

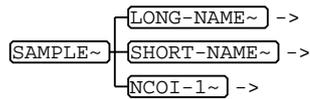
**Table 190: Attributes for ROW**

Name	Type	Class	Value	Remark
[ROWSEP]	number	implied		
[S]	cdata	implied		

Description Identifies the row information in a <tgroup> of a table. Default values come from the <table>, <tgroup>, <colspec> or <spanspec> attributes.

## 20 SAMPLE ... SJW

### 20.1 SAMPLE



images/SAMPLE.bmp

Figure 192: DTD-diagram for SAMPLE

Child elements `<long-name>` `<short-name>` `<ncoi-1>`

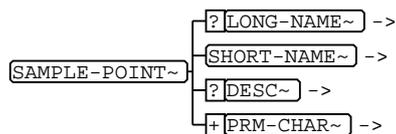
parent elements `<samples>`

Table 191: Attributes for SAMPLE

Name	Type	Class	Value	Remark
[F-CHILD-TYPE]	cdata	fixed	long-name:selection	
[F-ID-CLASS]	name	fixed	SAMPLE	
[ID]	id	required		
[S]	cdata	implied		

Description Definition of a sample.

### 20.2 SAMPLE-POINT



images/SAMPLE-POINT.bmp

Figure 193: DTD-diagram for SAMPLE-POINT

Child elements `<long-name>` `<short-name>` `<desc>` `<prm-char>`

parent elements `<net-interface-prms>`

Table 192: Attributes for SAMPLE-POINT

Name	Type	Class	Value	Remark
[F-ID-CLASS]	name	fixed	PRM	
[ID]	id	required		
[S]	cdata	implied		

## 20.3 SAMPLE-RATE

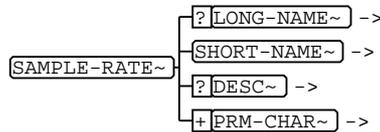


Figure 194: DTD-diagram for SAMPLE-RATE

Child elements `<long-name>` `<short-name>` `<desc>` `<prm-char>`

parent elements `<net-interface-prms>`

Table 193: Attributes for SAMPLE-RATE

Name	Type	Class	Value	Remark
[F-ID-CLASS]	name	fixed	PRM	
[ID]	id	required		
[S]	cdata	implied		

## 20.4 SAMPLE-REF



Figure 195: DTD-diagram for SAMPLE-REF

Child elements none

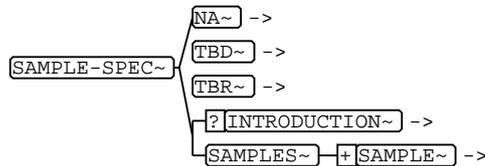
parent elements `<schedule>`

Table 194: Attributes for SAMPLE-REF

Name	Type	Class	Value	Remark
[HYNAMES]	names	fixed	LINKEND SAMPLE	
[HYTIME]	name	fixed	CLINK	
[S]	cdata	implied		
[SAMPLE]	idref	required		

Description Reference to a sample.

## 20.5 SAMPLE-SPEC



images/SAMPLE-SPEC.bmp

Figure 196: DTD-diagram for SAMPLE-SPEC

Child elements `<na>` `<tbd>` `<tbr>` `<introduction>` `<samples>`

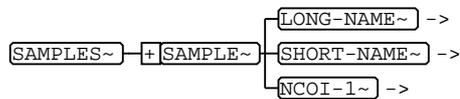
parent elements `<general-project-data>`

Table 195: Attributes for SAMPLE-SPEC

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

Description Null

## 20.6 SAMPLES



images/SAMPLES.bmp

Figure 197: DTD-diagram for SAMPLES

Child elements `<sample>`

parent elements `<sample-spec>`

Table 196: Attributes for SAMPLES

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

Description Definition of a samples.

## 20.7 SCHEDULE



Figure 198: DTD-diagram for SCHEDULE

Child elements **<sample-ref>** **<date>**

parent elements **<td>**

Table 197: Attributes for SCHEDULE

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Null

## 20.8 SCHEMATIC-ELEMENT



Figure 199: DTD-diagram for SCHEMATIC-ELEMENT

Child elements **<label>** **<v>**

parent elements **<schematic-elements>**

Table 198: Attributes for SCHEMATIC-ELEMENT

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Specifies a schematic element.

## 20.9 SCHEMATIC-ELEMENTS



Figure 200: DTD-diagram for SCHEMATIC-ELEMENTS

Child elements **<schematic-element>**

parent elements **<interface-circuit>**

Table 199: Attributes for SCHEMATIC-ELEMENTS

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Contains one or more schematic elements.

## 20.10 SEGMENT

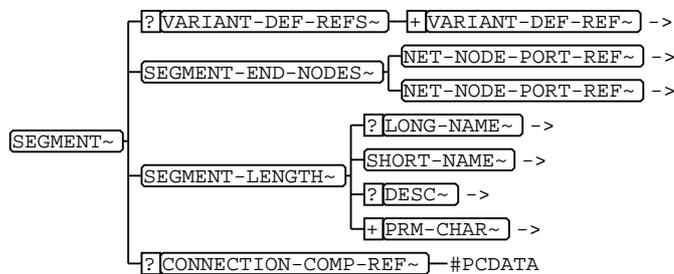


Figure 201: DTD-diagram for SEGMENT

Child elements **<variant-def-refs>** **<segment-end-nodes>** **<segment-length>** **<connection-comp-ref>**

parent elements **<segments>**

Table 200: Attributes for SEGMENT

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 20.11 SEGMENT-END-NODES

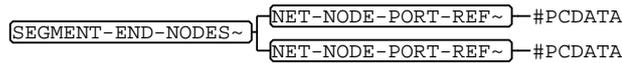


Figure 202: DTD-diagram for SEGMENT-END-NODES

Child elements <net-node-port-ref> <net-node-port-ref>

parent elements <segment>

Table 201: Attributes for SEGMENT-END-NODES

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

## 20.12 SEGMENT-LENGTH

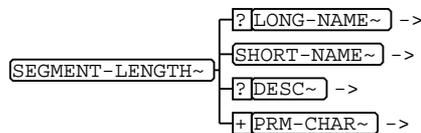


Figure 203: DTD-diagram for SEGMENT-LENGTH

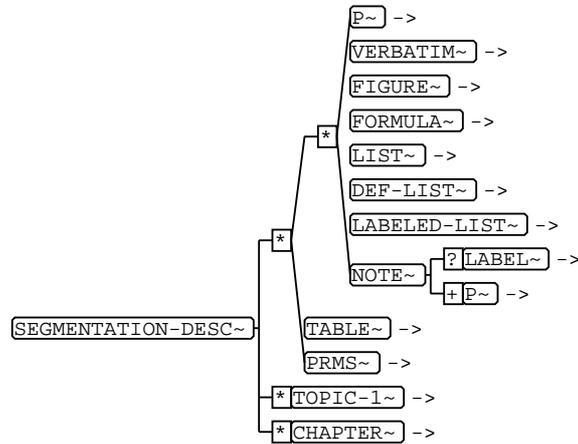
Child elements <long-name> <short-name> <desc> <prm-char>

parent elements <segment>

Table 202: Attributes for SEGMENT-LENGTH

Name	Type	Class	Value	Remark
[F-ID-CLASS]	name	fixed	PRM	
[ID]	id	required		
[S]	CDATA	implied		

## 20.13 SEGMENTATION-DESC



images/SEGMENTATION-D-DESC.bmp

Figure 204: DTD-diagram for SEGMENTATION-DESC

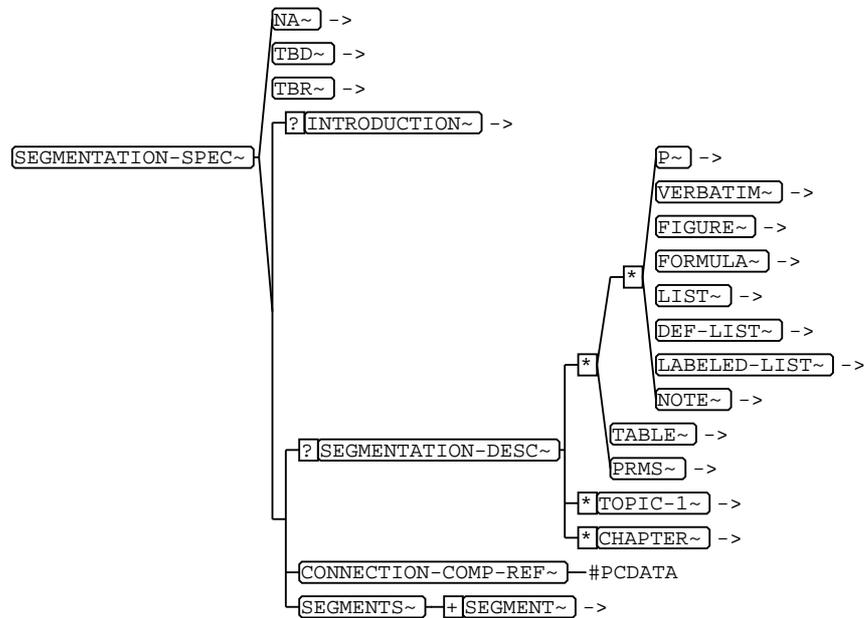
Child elements `<p>` `<verbatim>` `<figure>` `<formula>` `<list>` `<def-list>` `<labeled-list>`  
`<note>` `<table>` `<prms>` `<topic-1>` `<chapter>`

parent elements `<segmentation-spec>`

Table 203: Attributes for SEGMENTATION-DESC

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 20.14 SEGMENTATION-SPEC



images/SEGMENTATION-SPEC.bmp

Figure 205: DTD-diagram for SEGMENTATION-SPEC

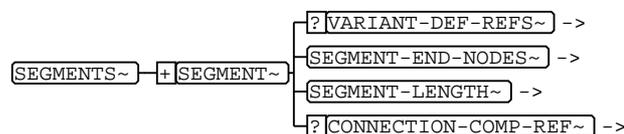
Child elements `<na>` `<tbd>` `<tbr>` `<introduction>` `<segmentation-desc>` `<connection-comp-ref>` `<segments>`

parent elements `<net-topology-spec>`

Table 204: Attributes for SEGMENTATION-SPEC

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 20.15 SEGMENTS



images/SEGMENTS.bmp

Figure 206: DTD-diagram for SEGMENTS

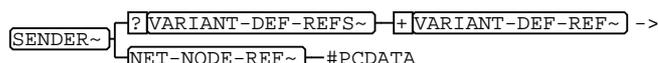
Child elements `<segment>`

parent elements `<segmentation-spec>`

**Table 205: Attributes for SEGMENTS**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 20.16 SENDER



images/SENDER.bmp

**Figure 207: DTD-diagram for SENDER**

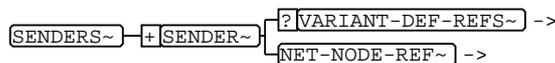
Child elements **<variant-def-refs>** **<net-node-ref>**

parent elements **<senders>**

**Table 206: Attributes for SENDER**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 20.17 SENDERS



images/SENDERS.bmp

**Figure 208: DTD-diagram for SENDERS**

Child elements **<sender>**

parent elements **<calc-net-message-identifiers>** **<net-message-identifier>**

**Table 207: Attributes for SENDERS**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 20.18 SHORT-NAME

`[SHORT-NAME]` cdata

Figure 209: DTD-diagram for SHORT-NAME

Child elements none

parent elements `<baudrate>` `<btl-cycles>` `<chapter>` `<company>` `<connection-comp-1>` `<cycle-time>` `<def-item>` `<figure>` `<formula>` `<latency-time>` `<msrnet>` `<nameloc>` `<net-line>` `<net-message>` `<net-message-set>` `<net-node>` `<net-node-port>` `<net-signal>` `<net-signal-group>` `<phase-relations>` `<powerdown-receive-time>` `<powerup-receive-time>` `<powerup-transmit-time>` `<prm>` `<sample>` `<sample-point>` `<sample-rate>` `<segment-length>` `<sjw>` `<std>` `<sw-compu-method>` `<sw-unit>` `<sync-edge>` `<table>` `<team-member>` `<topic-1>` `<topic-2>` `<variant-char>` `<variant-def>` `<xdoc>` `<xfile>`

Table 208: Attributes for SHORT-NAME

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Short designation, e.g. "TMOT". The `<short-name>` has an identifying character, in particular for outside references (e.g. *ASAP*, *ASCET*).

Example

Description Identifier or label of a parameter.

## 20.19 SI-UNIT

`[SI-UNIT~]` #PCDATA

Figure 210: DTD-diagram for SI-UNIT

Child elements none

parent elements `<sw-unit>`

**Table 209: Attributes for SI-UNIT**

Name	Type	Class	Value	Remark
[AMOUNT-OF-SUBSTANCE-EXPO]	cdata	implied		
[ELECTRIC-CURRENT-EXPO]	cdata	implied		
[LENGTH-EXPO]	cdata	implied		
[LUMINOUS-INTENSITY-EXPO]	cdata	implied		
[MASS-EXPO]	cdata	implied		
[S]	cdata	implied		
[THERMODYNAMIC-TEMPERATURE-EXPO]	cdata	implied		
[TIME-EXPO]	cdata	implied		

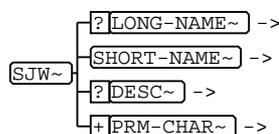
Description There are SI units of measure for the units of measure. STEP (ISO/DIS 10303-41. S96ff) is supported with regard to SI units by seven basic units (length, mass, time, electric\_current, thermodynamic\_temperature, amount\_of\_substance, luminous\_intensity). These basic units are realized by means of attributes.

Example

```

<sw-unit>
  <long-name>Meter per second</long-name>
  <short-name>mps</short-name>
  <si-unit length-expo = "1" time-expo = "-1"></si-unit>
  <sw-unit-display></sw-unit-display>
</sw-unit>
    
```

## 20.20 SJW



**Figure 211: DTD-diagram for SJW**

Child elements **<long-name> <short-name> <desc> <prm-char>**

parent elements **<net-interface-prms>**

**Table 210: Attributes for SJW**

Name	Type	Class	Value	Remark
[F-ID-CLASS]	name	fixed	PRM	
[ID]	id	required		
[S]	cdata	implied		

## 21 SPANSPEC ... SW-UNIT-DISPLAY

### 21.1 SPANSPEC

`<SPANSPEC>` empty

**Figure 212: DTD-diagram for SPANSPEC**

Child elements none

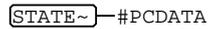
parent elements `<tgroup>`

**Table 211: Attributes for SPANSPEC**

Name	Type	Class	Value	Remark
[ALIGN]	nmtkgrp	default	CENTER LEFT RIGHT CENTER JUSTIFY CHAR	
[CHAR]	cdata	implied		
[CHAROFF]	nutoken	implied		
[COLSEP]	number	implied		
[NAMEEND]	nmtoken	required		
[NAMEST]	nmtoken	required		
[ROWSEP]	number	implied		
[S]	cdata	implied		
[SPANNAME]	nmtoken	required		

Description Identifies a horizontal span of columns and associated attributes that can subsequently be referenced by its spanname to provide attributes repeatedly used in the entries or entry tables in several rows of the table group controlled by the group `<colsdef>`, or within the specific `<thead>`, `<tfoot>`, or `<tbody>` context in which the `<spanspec>` occurs. `<Namest>` and `<nameend>` identify the first and last columns in increasing order that identify the span. The reason `<colname>` is used rather than `<colnum>` in identifying `<spanspec>` is that the names are independent of revisions that may change the number of inserted/deleted columns, as long as `namest` remains to the left of (has a smaller `colnum` than) `nameend`. `<spanspec>`s set on `<thead>` or `<tfoot>` override those on the containing `<tgroup>` and apply to just the `<thead>` or `<tfoot>`. `<spanspec>`s from the containing `<tgroup>` apply to `<tbody>`.

## 21.2 STATE



**Figure 213: DTD-diagram for STATE**

Child elements none

parent elements <company-revision-info>

**Table 212: Attributes for STATE**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description

Example

Description Processing state of a document, i.e draft, released.

## 21.3 STATE-1



**Figure 214: DTD-diagram for STATE-1**

Child elements none

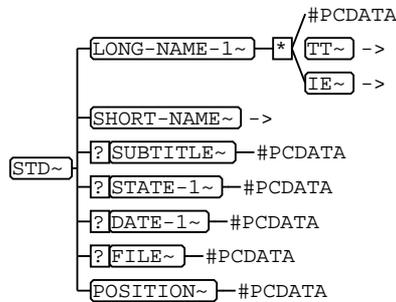
parent elements <std> <xdoc>

**Table 213: Attributes for STATE-1**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Definition of a state (multilingual).

## 21.4 STD



images/STD.bmp

Figure 215: DTD-diagram for STD

Child elements **<long-name-1>** **<short-name>** **<subtitle>** **<state-1>** **<date-1>** **<file>**  
**<position>**

parent elements **<p>** **<tbr>**

Table 214: Attributes for STD

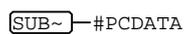
Name	Type	Class	Value	Remark
[F-CHILD-TYPE]	CDATA	fixed	date-1:date	
[F-ID-CLASS]	name	fixed	STD	
[ID]	id	required		
[S]	CDATA	implied		

Description

Example `<std>`  
`<long-name-1>ISO/DIS 10303-41 units of measure</long-name-1>`  
`<short-name>ISO/DIS 10303-41</short-name>`  
`<subtitle>SI units of measure</subtitle>`  
`<state-1></state-1>`  
`<date-1></date-1>`  
`<file>ISO10303-41.std</file>`  
`<position>S96ff</position>`  
`</std>`

Description Specification of a standard. A `<xref>` can refer to a standard within a paragraph.

## 21.5 SUB



images/SUB.bmp

Figure 216: DTD-diagram for SUB

Child elements none

parent elements `<abs>` `<change>` `<desc>` `<ie>` `<indent-sample>` `<item-label>` `<max>` `<min>` `<p>` `<reason>` `<sw-unit-display>` `<tbr>` `<text>` `<tol>` `<typ>` `<unit>`

**Table 215: Attributes for SUB**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Text which appears or is displayed below the normal base line of text.

## 21.6 SUBTITLE



**Figure 217: DTD-diagram for SUBTITLE**

Child elements none

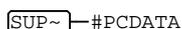
parent elements `<std>`

**Table 216: Attributes for SUBTITLE**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description This element defines a subtitle of the standard.

## 21.7 SUP



**Figure 218: DTD-diagram for SUP**

Child elements none

parent elements `<abs>` `<change>` `<desc>` `<ie>` `<indent-sample>` `<item-label>` `<max>` `<min>` `<p>` `<reason>` `<sw-unit-display>` `<tbr>` `<text>` `<tol>` `<typ>` `<unit>`

**Table 217: Attributes for SUP**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Text which appears or is displayed above the normal base line of text.

## 21.8 SW-ASAP-6-PRM-METHOD

`[SW-ASAP-6-PRM-METHOD~]`—#PCDATA

**Figure 219: DTD-diagram for SW-ASAP-6-PRM-METHOD**

Child elements none

parent elements `<sw-compu-method>`

**Table 218: Attributes for SW-ASAP-6-PRM-METHOD**

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

Description 6-parameter formula corresponding to ASAP (polynomial presentation. Presentation of the elements of the formula separated by white spaces. formula:  

$$\text{int} = (a \times x^2 + b \times x^1 + c) / (d \times x^2 + e \times x^1 + f)$$

Example `<sw-asap-6-prm-method>0 1 0 0 0 0.698 </sw-asap-6-prm-method>`

## 21.9 SW-BASE-TYPE

`[SW-BASE-TYPE~]`—#PCDATA

**Figure 220: DTD-diagram for SW-BASE-TYPE**

Child elements none

parent elements `<net-signal-spec-variant>`

**Table 219: Attributes for SW-BASE-TYPE**

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

Description Base type of SW variable (e.g. char, integer).

Example `<sw-variable-implementation>  
 <sw-base-type>UBIT</sw-base-type>  
 </sw-variable-implementation>`

## 21.10 SW-COMPU-GENERIC-MATH

`[SW-COMPU-GENERIC-MATH~] - #PCDATA`

Figure 221: DTD-diagram for SW-COMPU-GENERIC-MATH

Child elements none

parent elements `<sw-compu-method>`

Table 220: Attributes for SW-COMPU-GENERIC-MATH

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

Description The conversion formula is described by a general mathematical expression.

Example

## 21.11 SW-COMPU-METHOD

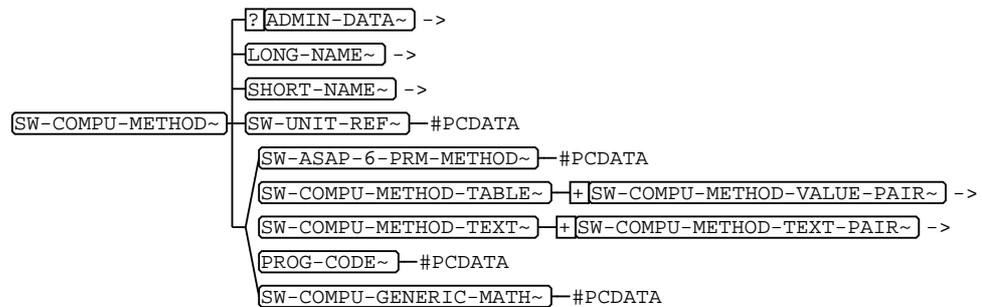


Figure 222: DTD-diagram for SW-COMPU-METHOD

Child elements `<admin-data>` `<long-name>` `<short-name>` `<sw-unit-ref>` `<sw-asap-6-prm-method>` `<sw-compu-method-table>` `<sw-compu-method-text>` `<prog-code>` `<sw-compu-generic-math>`

parent elements `<sw-compu-methods>`

**Table 221: Attributes for SW-COMPU-METHOD**

Name	Type	Class	Value	Remark
[F-ID-CLASS]	name	fixed	SW-COMPU-METHOD	
[ID]	id	required		
[S]	cdata	implied		

Description Conversion formula. Computing procedure according to which a control-unit-internal variable can be converted into its physical value. The conversion formula must be reversible.

Example

## 21.12 SW-COMPU-METHOD-REF

`[SW-COMPU-METHOD-REF] cdata`

**Figure 223: DTD-diagram for SW-COMPU-METHOD-REF**

Child elements none

parent elements `<net-signal-spec-variant>`

**Table 222: Attributes for SW-COMPU-METHOD-REF**

Name	Type	Class	Value	Remark
[HYNAMES]	names	fixed	LINKEND SW-COMPU-METHOD	
[HYTIME]	name	fixed	CLINK	
[S]	cdata	implied		
[SW-COMPU-METHOD]	idref	required		

Description Reference to a conversion formula

Example

## 21.13 SW-COMPU-METHOD-TABLE



Figure 224: DTD-diagram for SW-COMPU-METHOD-TABLE

Child elements `<sw-compu-method-value-pair>`

parent elements `<sw-compu-method>`

Table 223: Attributes for SW-COMPU-METHOD-TABLE

Name	Type	Class	Value	Remark
[INTERPOLATION-STYLE]	nmtkgrp	default	INTERPOLATION INTERPOLATION NO-INTERPOLATION DISCRETE	
[S]	cdata	implied		

Description With this form for the conversion formula, the relationship between internal and physical presentation is given using a table of for the internal-physical pairs of values. An attribute *interpolation-style* is given that can take the values *interpolation* (default) and *discrete*.

Example

## 21.14 SW-COMPU-METHOD-TEXT



Figure 225: DTD-diagram for SW-COMPU-METHOD-TEXT

Child elements `<sw-compu-method-text-pair>`

parent elements `<sw-compu-method>`

**Table 224: Attributes for SW-COMPU-METHOD-TEXT**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description The conversion formula is described in text form. Unlike the other types of conversions, the physical side does not constitute a number but rather a text. Applications are conceivable for switches ("on"/"off") or for country identification ("D", "F", "US").

Example

```

<sw-compu-method-text>
  <sw-compu-method-text-pair>
    <cmt-int>0</cmt-int>
    <cmt-text>Heck</cmt-text>
  </sw-compu-method-text-pair>
  <sw-compu-method-text-pair>
    <cmt-int>16</cmt-int>
    <cmt-text>16</cmt-text>
  </sw-compu-method-text-pair>
</sw-compu-method-text>

```

## 21.15 SW-COMPU-METHOD-TEXT-PAIR



**Figure 226: DTD-diagram for SW-COMPU-METHOD-TEXT-PAIR**

Child elements **<cmt-int>** **<cmt-text>**

parent elements **<sw-compu-method-text>**

**Table 225: Attributes for SW-COMPU-METHOD-TEXT-PAIR**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Includes an internal and a text-form value for text-type conversion formulae.

Example

```

<sw-compu-method-text-pair>
  <cmt-int>0</cmt-int>
  <cmt-text>Heck</cmt-text>
</sw-compu-method-text-pair>

```

## 21.16 SW-COMPU-METHOD-VALUE-PAIR



Figure 227: DTD-diagram for SW-COMPU-METHOD-VALUE-PAIR

Child elements `<cmt-int>` `<cmt-phys>`

parent elements `<sw-compu-method-table>`

Table 226: Attributes for SW-COMPU-METHOD-VALUE-PAIR

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

Description Includes an internal and a physical value for tabular types of conversion formulae.

Example

## 21.17 SW-COMPU-METHODS

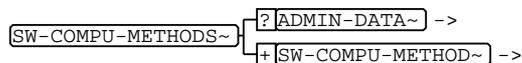


Figure 228: DTD-diagram for SW-COMPU-METHODS

Child elements `<admin-data>` `<sw-compu-method>`

parent elements `<net-signal-spec>`

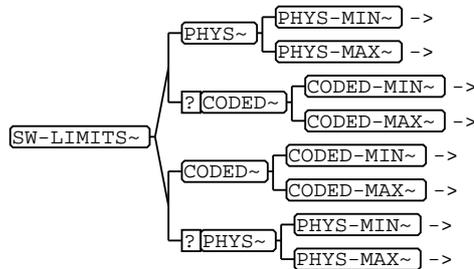
Table 227: Attributes for SW-COMPU-METHODS

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

Description List of conversion formulae.

Example

## 21.18 SW-LIMITS



images/SW-LIMITS.bmp

Figure 229: DTD-diagram for SW-LIMITS

Child elements `<phys>` `<coded>` `<coded>` `<phys>`

parent elements `<net-signal-spec-variant>`

Table 228: Attributes for SW-LIMITS

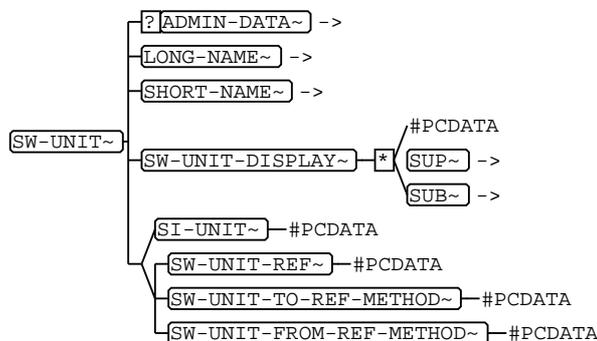
Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Minimum and maximum values for the physical and the control-unit-internal values are given here.

```

Example
<sw-variable-implementation>
  <sw-base-type>UBYTE</sw-base-type>
  <sw-limits>
    <phys>
      <phys-min>40.000000</phys-min>
      <phys-max>4000.000000</phys-max>
    </phys>
  </sw-limits>
  ...
</sw-variable-implementation>
    
```

## 21.19 SW-UNIT



images/SW-UNIT.bmp

Figure 230: DTD-diagram for SW-UNIT

Child elements **<admin-data>** **<long-name>** **<short-name>** **<sw-unit-display>** **<si-unit>** **<sw-unit-ref>** **<sw-unit-to-ref-method>** **<sw-unit-from-ref-method>**

parent elements **<sw-units>**

**Table 229: Attributes for SW-UNIT**

Name	Type	Class	Value	Remark
[F-ID-CLASS]	name	fixed	SW-UNIT	
[ID]	id	required		
[S]	cdata	implied		

## 21.20 SW-UNIT-DISPLAY



**Figure 231: DTD-diagram for SW-UNIT-DISPLAY**

Child elements **<sup>** **<sub>**

parent elements **<sw-unit>**

**Table 230: Attributes for SW-UNIT-DISPLAY**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 22 SW-UNIT-FROM-REF-METHOD ... SYSTEM-OVERVIEW

### 22.1 SW-UNIT-FROM-REF-METHOD

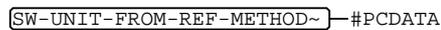


Figure 232: DTD-diagram for SW-UNIT-FROM-REF-METHOD

Child elements none

parent elements **<sw-unit>**

Table 231: Attributes for SW-UNIT-FROM-REF-METHOD

Name	Type	Class	Value	Remark
[S]	cdata	implied		

### 22.2 SW-UNIT-REF



Figure 233: DTD-diagram for SW-UNIT-REF

Child elements none

parent elements **<sw-compu-method>** **<sw-unit>**

Table 232: Attributes for SW-UNIT-REF

Name	Type	Class	Value	Remark
[HYNAMES]	names	fixed	LINKEND SW-UNIT	
[HYTIME]	name	fixed	CLINK	
[S]	cdata	implied		
[SW-UNIT]	idref	required		

## 22.3 SW-UNIT-TO-REF-METHOD

`[SW-UNIT-TO-REF-METHOD~] - #PCDATA`

Figure 234: DTD-diagram for SW-UNIT-TO-REF-METHOD

Child elements none

parent elements `<sw-unit>`

Table 233: Attributes for SW-UNIT-TO-REF-METHOD

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

images/SW-UNIT-TO-REF-METHOD.bmp

## 22.4 SW-UNITS

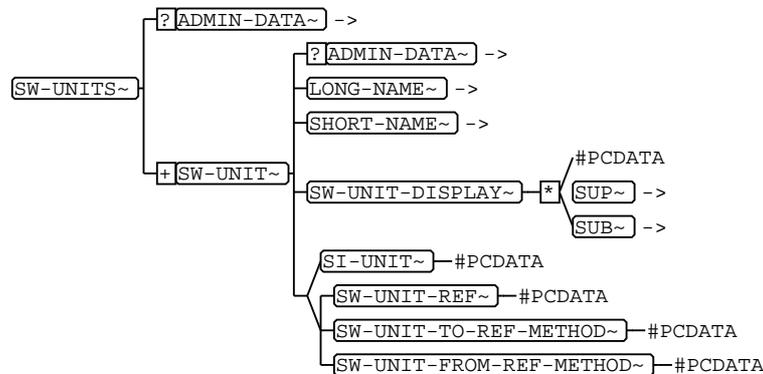


Figure 235: DTD-diagram for SW-UNITS

Child elements `<admin-data>` `<sw-unit>`

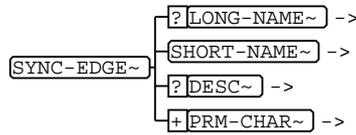
parent elements `<net-signal-spec>`

Table 234: Attributes for SW-UNITS

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

images/SW-UNITS.bmp

## 22.5 SYNC-EDGE



images/SYNC-EDGE.bmp

Figure 236: DTD-diagram for SYNC-EDGE

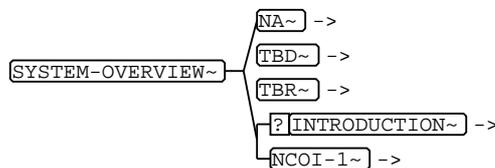
Child elements `<long-name>` `<short-name>` `<desc>` `<prm-char>`

parent elements `<net-interface-prms>`

Table 235: Attributes for SYNC-EDGE

Name	Type	Class	Value	Remark
[F-ID-CLASS]	name	fixed	PRM	
[ID]	id	required		
[S]	cdata	implied		

## 22.6 SYSTEM-OVERVIEW



images/SYSTEM-OVERVIEW.bmp

Figure 237: DTD-diagram for SYSTEM-OVERVIEW

Child elements `<na>` `<tbd>` `<tbr>` `<introduction>` `<ncoi-1>`

parent elements `<general-project-data>`

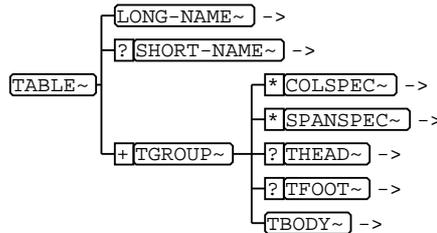
Table 236: Attributes for SYSTEM-OVERVIEW

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Null

## 23 TABLE ... TT

### 23.1 TABLE



images/TABLE.bmp

Figure 238: DTD-diagram for TABLE

Child elements **<long-name>** **<short-name>** **<tgroup>**

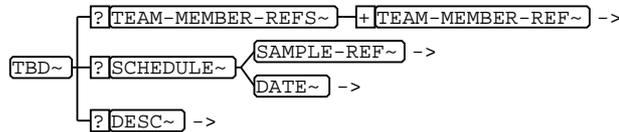
parent elements **<add-info>** **<chapter>** **<driver-concept>** **<introduction>** **<ncoi-1>**  
**<ncoi-3>** **<net-emc-design>** **<net-line-desc>** **<net-message-desc>**  
**<net-message-layout>** **<segmentation-desc>** **<topic-1>** **<topic-2>**

Table 237: Attributes for TABLE

Name	Type	Class	Value	Remark
[COLSEP]	number	implied		
[F-ID-CLASS]	name	fixed	TABLE	
[FLOAT]	nmtkgrp	implied	FLOAT NO-FLOAT	
[FRAME]	nmtkgrp	implied	TOP BOTTOM TOPBOT ALL SIDES NONE	
[HELP-ENTRY]	cdata	implied		
[ID]	id	required		
[ORIENT]	nmtkgrp	implied	PORT LAND	
[PGWIDE]	number	implied		
[ROWSEP]	number	implied		
[S]	cdata	implied		
[SHORTENTRY]	number	implied		
[TABSTYLE]	nmtoken	implied		
[TOCENTRY]	number	default	1	

Description Identifies a table.

## 23.2 TBD



images/TBD.bmp

Figure 239: DTD-diagram for TBD

Child elements `<team-member-refs>` `<schedule>` `<desc>`

parent elements `<acceptance-cond>` `<add-spec>` `<connection-comp-spec-1>` `<demarcation-other-projects>` `<dir-hand-over-doc-data>` `<general-net-spec>` `<general-project-data>` `<integration-capability>` `<net-architecture>` `<net-block-modes>` `<net-diag-spec>` `<net-error-handling>` `<net-init-spec>` `<net-interface-spec>` `<net-line-spec>` `<net-message-spec>` `<net-mgmt-spec>` `<net-node-spec>` `<net-oper-spec>` `<net-signal-spec>` `<net-topology-spec>` `<objectives>` `<parallel-designs>` `<project-schedule>` `<protocols>` `<purchasing-cond>` `<reason-order>` `<sample-spec>` `<segmentation-spec>` `<system-overview>` `<variant-spec>`

Table 238: Attributes for TBD

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Specifies that this information (see parent element) will be defined. The context of this element describes the reason why the information isn't defined.

## 23.3 TBODY



images/TBODY.bmp

Figure 240: DTD-diagram for TBODY

Child elements `<row>`

parent elements `<tgroup>`

Table 239: Attributes for TBODY

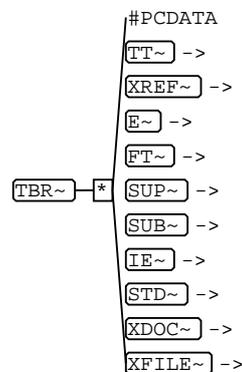
Name	Type	Class	Value	Remark
[S]	cdata	implied		

**Table 239 (Cont.): Attributes for TBODY**

Name	Type	Class	Value	Remark
[VALIGN]	nmtkgrp	default	TOP TOP MIDDLE BOT- TOM	

Description Defines the table body.

## 23.4 TBR



**Figure 241: DTD-diagram for TBR**

Child elements <tt> <xref> <e> <ft> <sup> <sub> <ie> <std> <xdoc> <xfile>

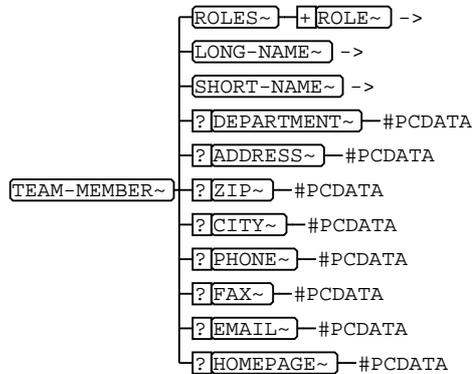
parent elements <acceptance-cond> <add-spec> <connection-comp-spec-1> <demarcation-other-projects> <dir-hand-over-doc-data> <general-net-spec> <general-project-data> <integration-capability> <net-architecture> <net-block-modes> <net-diag-spec> <net-error-handling> <net-init-spec> <net-interface-spec> <net-line-spec> <net-message-spec> <net-mgmt-spec> <net-node-spec> <net-oper-spec> <net-signal-spec> <net-topology-spec> <objectives> <parallel-designs> <project-schedule> <protocols> <purchasing-cond> <reason-order> <sample-spec> <segmentation-spec> <system-overview> <variant-spec>

**Table 240: Attributes for TBR**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Null

## 23.5 TEAM-MEMBER



images/TEAM-MEMBER.bmp

Figure 242: DTD-diagram for TEAM-MEMBER

Child elements `<roles>` `<long-name>` `<short-name>` `<department>` `<address>` `<zip>`  
`<city>` `<phone>` `<fax>` `<email>` `<homepage>`

parent elements `<team-members>`

Table 241: Attributes for TEAM-MEMBER

Name	Type	Class	Value	Remark
[F-ID-CLASS]	name	fixed	TEAM-MEMBER	
[ID]	id	required		
[S]	cdata	implied		

Description Definition of a team member.

## 23.6 TEAM-MEMBER-REF



images/TEAM-MEMBER-REF.bmp

Figure 243: DTD-diagram for TEAM-MEMBER-REF

Child elements none

parent elements `<doc-revision>` `<team-member-refs>`

**Table 242: Attributes for TEAM-MEMBER-REF**

Name	Type	Class	Value	Remark
[HYNAMES]	names	fixed	LINKEND TEAM-MEMBER	
[HYTIME]	name	fixed	CLINK	
[S]	cdata	implied		
[TEAM-MEMBER]	idref	required		

Description Reference to an team member.

## 23.7 TEAM-MEMBER-REFS

`[TEAM-MEMBER-REFS~]+ [TEAM-MEMBER-REF~] #PCDATA`

**Figure 244: DTD-diagram for TEAM-MEMBER-REFS**

Child elements `<team-member-ref>`

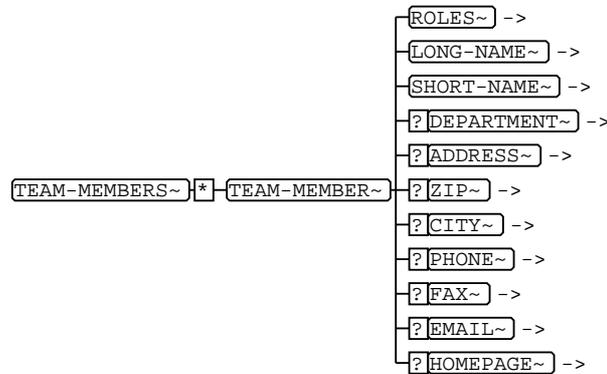
parent elements `<tbd>`

**Table 243: Attributes for TEAM-MEMBER-REFS**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description List of references to team member.

## 23.8 TEAM-MEMBERS



images/TEAM-MEMBERS.bmp

Figure 245: DTD-diagram for TEAM-MEMBERS

Child elements **<team-member>**

parent elements **<company>**

Table 244: Attributes for TEAM-MEMBERS

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description This element groups some team-member of a company for the actual project.

## 23.9 TEX-MATH



images/TEX-MATH.bmp

Figure 246: DTD-diagram for TEX-MATH

Child elements none

parent elements **<formula>**

Table 245: Attributes for TEX-MATH

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Describes a TeX (LaTeX) formular

## 23.10 TEXT

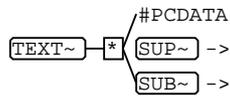


Figure 247: DTD-diagram for TEXT

Child elements `<sup>` `<sub>`

parent elements `<prm-char>`

Table 246: Attributes for TEXT

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

Description Definition of text.

## 23.11 TFOOT

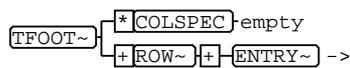


Figure 248: DTD-diagram for TFOOT

Child elements `<colspec>` `<row>`

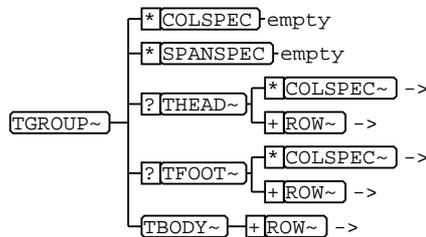
parent elements `<tgroup>`

Table 247: Attributes for TFOOT

Name	Type	Class	Value	Remark
[S]	CDATA	implied		
[VALIGN]	nmtkgrp	default	TOP TOP MIDDLE BOT- TOM	

Description Identifies the footer information in a table displayed after the `<tbody>` and also at the bottom of any `<tbody>` rows before a physical break.

## 23.12 TGROUP



images/TGROUP.bmp

Figure 249: DTD-diagram for TGROUP

Child elements **<colspec>** **<spanspec>** **<thead>** **<tfoot>** **<tbody>**

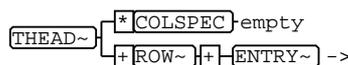
parent elements **<table>**

Table 248: Attributes for TGROUP

Name	Type	Class	Value	Remark
[ALIGN]	nmtkgrp	default	LEFT LEFT RIGHT CEN- TER JUSTIFY CHAR	
[CHAR]	cdata	default		
[CHAROFF]	nutoken	default	50	
[COLS]	number	required		
[COLSEP]	number	implied		
[ROWSEP]	number	implied		
[S]	cdata	implied		
[TGROUPSTYLE]	nmtoken	implied		

Description Each **<tgroup>** effectively identifies a new partition of a table. If a new **<colspec>** is provided, it replaces a previous one. If both **<colspec>** and **<spanspec>** are new, **<spanspec>** should refer to columns in the most recent **<colspec>**.

## 23.13 THEAD



images/THEAD.bmp

Figure 250: DTD-diagram for THEAD

Child elements **<colspec>** **<row>**

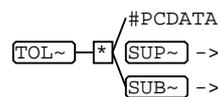
parent elements **<tgroup>**

**Table 249: Attributes for THEAD**

Name	Type	Class	Value	Remark
[S]	cdata	implied		
[VALIGN]	nmtkgrp	default	BOTTOM TOP MIDDLE BOT- TOM	

Description Identifies the heading information in a table, displayed at the top of the table and again at the top of any continuation after a physical break between <rows> in <tbody>.

## 23.14 TOL



**Figure 251: DTD-diagram for TOL**

Child elements **<sup>** **<sub>**

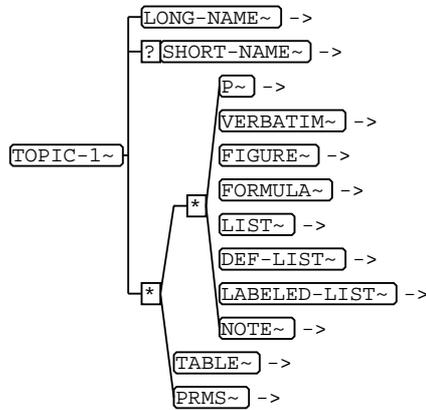
parent elements **<prm-char>**

**Table 250: Attributes for TOL**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Definition of a tolerance of the defined <value>.

## 23.15 TOPIC-1



images/TOPIC-1.bmp

Figure 252: DTD-diagram for TOPIC-1

Child elements **<long-name>** **<short-name>** **<p>** **<verbatim>** **<figure>** **<formula>**  
**<list>** **<def-list>** **<labeled-list>** **<note>** **<table>** **<prms>**

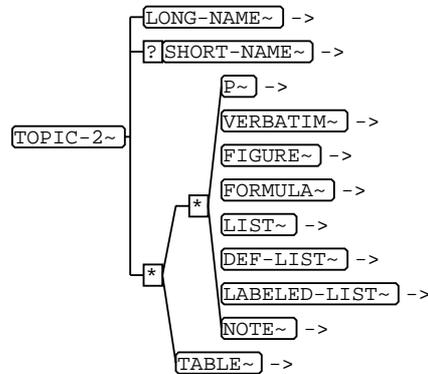
parent elements **<add-info>** **<chapter>** **<driver-concept>** **<ncoi-1>** **<net-emc-design>**  
**<net-line-desc>** **<net-message-desc>** **<net-message-layout>** **<segmentation-desc>**

Table 251: Attributes for TOPIC-1

Name	Type	Class	Value	Remark
[F-ID-CLASS]	name	fixed	TOPIC	
[HELP-ENTRY]	cdata	implied		
[ID]	id	required		
[S]	cdata	implied		

Description This element groups tables, parameter groups, figures, lists and paragraphs. It has the same function as a sub-chapter or sub-section.

## 23.16 TOPIC-2



images/TOPIC-2.bmp

Figure 253: DTD-diagram for TOPIC-2

Child elements **<long-name>** **<short-name>** **<p>** **<verbatim>** **<figure>** **<formula>**  
**<list>** **<def-list>** **<labeled-list>** **<note>** **<table>**

parent elements **<introduction>** **<ncoi-3>**

Table 252: Attributes for TOPIC-2

Name	Type	Class	Value	Remark
[F-ID-CLASS]	name	fixed	TOPIC	
[HELP-ENTRY]	cdata	implied		
[ID]	id	required		
[S]	cdata	implied		

Description This element groups tables, figures, lists and paragraphs. It has the same function as a sub-chapter or sub-section.

## 23.17 TOPOLOGY-TYPE



images/TOPOLOGY-TYPE.bmp

Figure 254: DTD-diagram for TOPOLOGY-TYPE

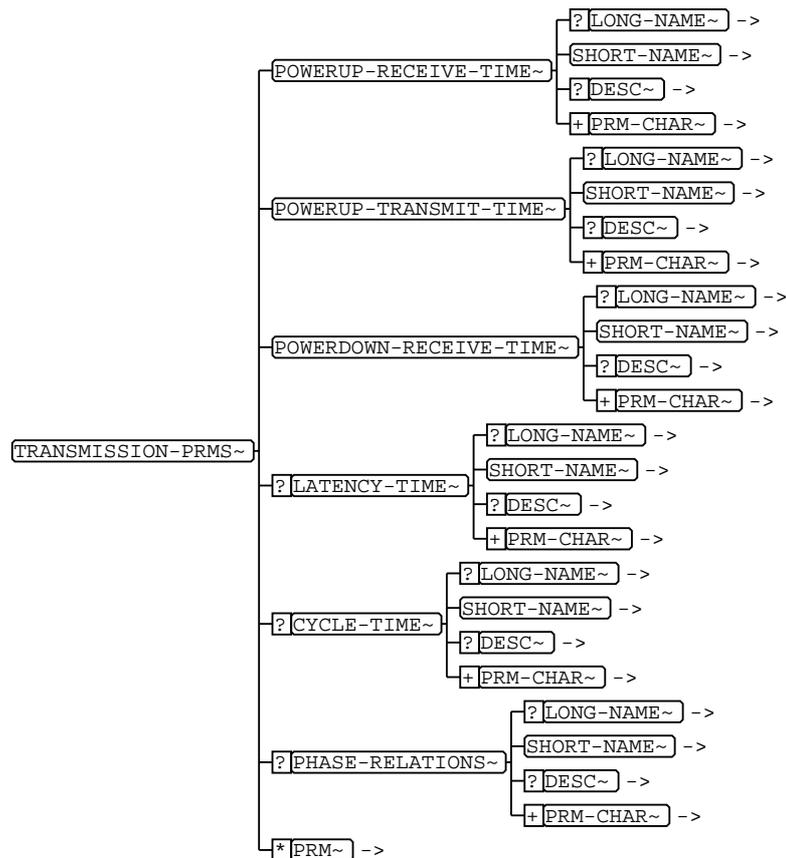
Child elements none

parent elements **<net-topology-spec>**

**Table 253: Attributes for TOPOLOGY-TYPE**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 23.18 TRANSMISSION-PRMS



**Figure 255: DTD-diagram for TRANSMISSION-PRMS**

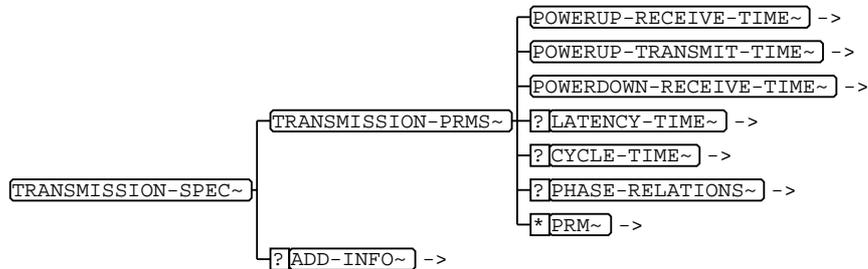
Child elements `<powerup-receive-time>` `<powerup-transmit-time>` `<powerdown-receive-time>` `<latency-time>` `<cycle-time>` `<phase-relations>` `<prm>`

parent elements `<transmission-spec>`

**Table 254: Attributes for TRANSMISSION-PRMS**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 23.19 TRANSMISSION-SPEC



images/TRANSMISSION-SPEC.bmp

Figure 256: DTD-diagram for TRANSMISSION-SPEC

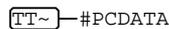
Child elements `<transmission-prms>` `<add-info>`

parent elements `<net-message>`

Table 255: Attributes for TRANSMISSION-SPEC

Name	Type	Class	Value	Remark
[S]	cdata	implied		

## 23.20 TT



images/TT.bmp

Figure 257: DTD-diagram for TT

Child elements none

parent elements `<change>` `<desc>` `<indent-sample>` `<item-label>` `<long-name>`  
`<long-name-1>` `<p>` `<reason>` `<tbr>`

Table 256: Attributes for TT

Name	Type	Class	Value	Remark
[S]	cdata	implied		
[TYPE]	nmtkgrp	required	SGMLTAG SGML- ATTRIBUTE TOOL PRODUCT VARI- ABLE STATE PRM MATERI- AL CONTROL- ELEMENT CODE ORGANISATION OTHER	

**Table 256 (Cont.): Attributes for TT**

Name	Type	Class	Value	Remark
[USER-DEFINED-TYPE]	cdata	implied		

Description technical term

## 24 TYP ... TYP

### 24.1 TYP

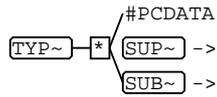


Figure 258: DTD-diagram for TYP

Child elements **<sup>** **<sub>**

parent elements **<prm-char>**

Table 257: Attributes for TYP

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Defines a typical value.

## 25 UNIT ... USED-LANGUAGES

### 25.1 UNIT

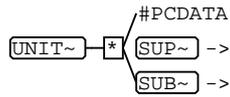


Figure 259: DTD-diagram for UNIT

Child elements **<sup>** **<sub>**  
parent elements **<prm-char>**

Table 258: Attributes for UNIT

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Definition of a unit. Please use the standardized SI symbols.

### 25.2 USED-LANGUAGES



Figure 260: DTD-diagram for USED-LANGUAGES

Child elements none  
parent elements **<admin-data>**

Table 259: Attributes for USED-LANGUAGES

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Null

## 26 V ... VERBATIM

### 26.1 V

 #PCDATA

**Figure 261: DTD-diagram for V**

Child elements none

parent elements <schematic-element>

**Table 260: Attributes for V**

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

Description Specifies a value.

### 26.2 VALUE

 #PCDATA

**Figure 262: DTD-diagram for VALUE**

Child elements none

parent elements <variant-char-value>

**Table 261: Attributes for VALUE**

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

Description Specifies the value of a variant characteristic.

## 26.3 VARIANT-CHAR

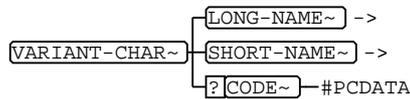


Figure 263: DTD-diagram for VARIANT-CHAR

Child elements **<long-name>** **<short-name>** **<code>**

parent elements **<variant-chars>**

Table 262: Attributes for VARIANT-CHAR

Name	Type	Class	Value	Remark
[F-ID-CLASS]	name	fixed	VARIANT-CHAR	
[ID]	id	required		
[S]	cdata	implied		
[TYPE]	nmtkgrp	required	NEW-PART-NUMBER NO-NEW-PART-NUMBER	

Description Definition of a variant characteristic.

## 26.4 VARIANT-CHAR-ASSIGN

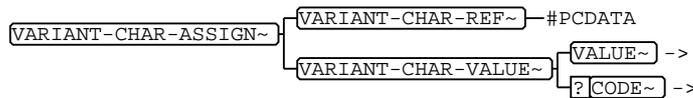


Figure 264: DTD-diagram for VARIANT-CHAR-ASSIGN

Child elements **<variant-char-ref>** **<variant-char-value>**

parent elements **<variant-char-assigns>**

Table 263: Attributes for VARIANT-CHAR-ASSIGN

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Assigns a variant characteristic.

## 26.5 VARIANT-CHAR-ASSIGNS



Figure 265: DTD-diagram for VARIANT-CHAR-ASSIGNS

Child elements **<variant-char-assign>**

parent elements **<variant-def>**

Table 264: Attributes for VARIANT-CHAR-ASSIGNS

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Assigns variant characteristics.

## 26.6 VARIANT-CHAR-REF



Figure 266: DTD-diagram for VARIANT-CHAR-REF

Child elements none

parent elements **<variant-char-assign>**

Table 265: Attributes for VARIANT-CHAR-REF

Name	Type	Class	Value	Remark
[HYNAMES]	names	fixed	LINKEND VARIANT-CHAR	
[HYTIME]	name	fixed	CLINK	
[S]	cdata	implied		
[VARIANT-CHAR]	idref	required		

Description Reference to a variant chararteristic.

## 26.7 VARIANT-CHAR-VALUE

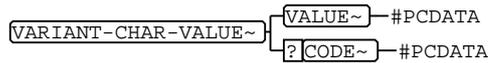


Figure 267: DTD-diagram for VARIANT-CHAR-VALUE

Child elements `<value>` `<code>`

parent elements `<variant-char-assign>`

Table 266: Attributes for VARIANT-CHAR-VALUE

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

Description This element contains the value of a variant characteristic.

## 26.8 VARIANT-CHARS



Figure 268: DTD-diagram for VARIANT-CHARS

Child elements `<variant-char>`

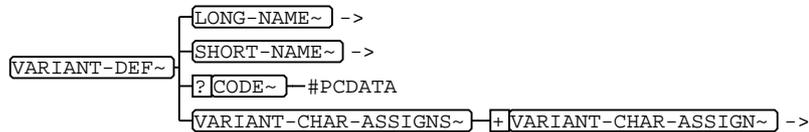
parent elements `<variant-spec>`

Table 267: Attributes for VARIANT-CHARS

Name	Type	Class	Value	Remark
[S]	CDATA	implied		

Description Definition of variant characteristics.

## 26.9 VARIANT-DEF



images/VARIANT-DEF.bmp

Figure 269: DTD-diagram for VARIANT-DEF

Child elements `<long-name>` `<short-name>` `<code>` `<variant-char-assigns>`

parent elements `<variant-defs>`

Table 268: Attributes for VARIANT-DEF

Name	Type	Class	Value	Remark
[F-ID-CLASS]	name	fixed	VARIANT-DEF	
[ID]	id	required		
[S]	cdata	implied		

Description General definition of a variant.

## 26.10 VARIANT-DEF-REF



images/VARIANT-DEF-REF.bmp

Figure 270: DTD-diagram for VARIANT-DEF-REF

Child elements none

parent elements `<variant-def-refs>`

Table 269: Attributes for VARIANT-DEF-REF

Name	Type	Class	Value	Remark
[HYNAMES]	names	fixed	LINKEND VARIANT-DEF	
[HYTIME]	name	fixed	CLINK	
[S]	cdata	implied		
[VARIANT-DEF]	idref	required		

Description Reference to a variant definition.

## 26.11 VARIANT-DEF-REFS

`VARIANT-DEF-REFS~` — + `VARIANT-DEF-REF~` — #PCDATA

Figure 271: DTD-diagram for VARIANT-DEF-REFS

Child elements `<variant-def-ref>`

parent elements `<net-message>` `<net-message-signal>` `<net-signal>` `<net-signal-spec-variant>` `<node-variant>` `<segment>` `<sender>`

Table 270: Attributes for VARIANT-DEF-REFS

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description References to a variant definition.

## 26.12 VARIANT-DEFS

`VARIANT-DEFS~` — + `VARIANT-DEF~` —

- `LONG-NAME~` ->
- `SHORT-NAME~` ->
- `?[CODE~]` ->
- `VARIANT-CHAR-ASSIGNS~` ->

Figure 272: DTD-diagram for VARIANT-DEFS

Child elements `<variant-def>`

parent elements `<variant-spec>`

Table 271: Attributes for VARIANT-DEFS

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description General definitions of a variant.

## 26.13 VARIANT-SPEC

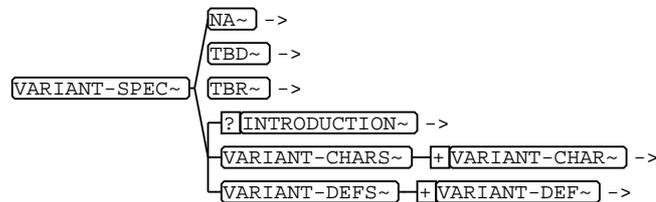


Figure 273: DTD-diagram for VARIANT-SPEC

Child elements `<na>` `<td>` `<tr>` `<introduction>` `<variant-chars>` `<variant-defs>`

parent elements `<general-project-data>`

Table 272: Attributes for VARIANT-SPEC

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description Specification of a variant.

## 26.14 VERBATIM



Figure 274: DTD-diagram for VERBATIM

Child elements none

parent elements `<add-info>` `<chapter>` `<driver-concept>` `<entry>` `<figure>` `<formula>` `<introduction>` `<item>` `<labeled-item>` `<ncoi-1>` `<ncoi-3>` `<net-emc-design>` `<net-line-desc>` `<net-message-desc>` `<net-message-layout>` `<remark>` `<segmentation-desc>` `<topic-1>` `<topic-2>`

Table 273: Attributes for VERBATIM

Name	Type	Class	Value	Remark
[ALLOW-BREAK]	number	default	1	
[FLOAT]	nmtkgrp	implied	FLOAT NO-FLOAT	
[HELP-ENTRY]	cdata	implied		
[S]	cdata	implied		

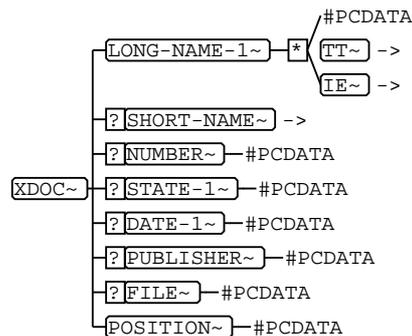
Description Used to indicate if the text is to be picked up and laid down as it is. Typically, it implies the usage of a monospace font and the designated point size. All record

	Structure Principles of MSRNET.DTD MSRNET-EADOC Chapter: VERBATIM	Page: 206/220 Date: 2002-02-07 State: RD
---	---	--

ends are retained. The use of tabs in verbatim text may cause unexpected results and should therefore be avoided.

## 27 XDOC ... XREF

### 27.1 XDOC



images/XDOC.bmp

Figure 275: DTD-diagram for XDOC

Child elements **<long-name-1>** **<short-name>** **<number>** **<state-1>** **<date-1>** **<publisher>** **<file>** **<position>**

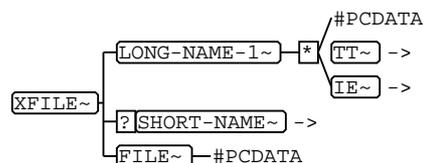
parent elements **<p>** **<tr>**

Table 274: Attributes for XDOC

Name	Type	Class	Value	Remark
[F-CHILD-TYPE]	cdata	fixed	date-1:date	
[F-ID-CLASS]	name	fixed	XDOC	
[ID]	id	required		
[S]	cdata	implied		

Description Specify an external document which is not accessed by the SGML-System. The content of this external document is 'not included' in the document instance or presented in a report.

### 27.2 XFILE



images/XFILE.bmp

Figure 276: DTD-diagram for XFILE

Child elements **<long-name-1>** **<short-name>** **<file>**

parent elements <p> <tbr>

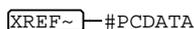
**Table 275: Attributes for XFILE**

Name	Type	Class	Value	Remark
[F-ID-CLASS]	name	fixed	XFILE	
[ID]	id	required		
[S]	cdata	implied		

Description Specify an external file which is not accessed by the SGML-System. The content of this external file is 'not included' in the document instance or presented in a report.

## 27.3

## XREF



**Figure 277: DTD-diagram for XREF**

Child elements none

parent elements <change> <desc> <indent-sample> <item-label> <p> <reason> <tbr>

**Table 276: Attributes for XREF**

Name	Type	Class	Value	Remark
[EXT-ID-CLASS]	cdata	implied		
[HYNAMES]	names	fixed	LINKEND ID-REF	
[HYTIME]	name	fixed	CLINK	

images/XREF.bmp

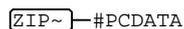
**Table 276 (Cont.): Attributes for XREF**

Name	Type	Class	Value	Remark
[ID-CLASS]	nmtkgrp	required	CHAPTER COMPANY CONNECTION-COMP DEF-ITEM FIGURE FORMULA NET-LINE NET-MESSAGE NET-MESSAGE-SET NET-NODE NET-NODE-PORT NET-SIGNAL NET-SIGNAL-GROUP PRM SAMPLE STD SW-COMPUTER METHOD SW-UNIT TABLE TEAM-MEMBER TOPIC VARIANT-CHAR VARIANT-DEF X-DOC XFILE EXTERNAL	
[ID-REF]	idref	required		
[S]	cdata	implied		

Description Reference inside a paragraph to objects (elements with identifier) in the document. The type attribute classifies this reference into following classes: - figures - tables - external documents - parameters - standards - other For the output, the processing system will use this classes for difference presentation.

## 28 ZIP ... ZIP

### 28.1 ZIP

#PCDATA

**Figure 278: DTD-diagram for ZIP**

Child elements none

parent elements <team-member>

**Table 277: Attributes for ZIP**

Name	Type	Class	Value	Remark
[S]	cdata	implied		

Description This element contains the ZIP of the used address.

	Structure Principles of MSRNET.DTD MSRNET-EADOC	Page: 211/220
	Chapter: Documentadministration	Date: 2002-02-07 State: RD

## Documentadministration

### Overview of Changes

Total	Documentpart	Nr.	Change	Reason	Related to
19.2.1999		3	initial release		Content
28.05.99		2	Extension of element descriptions		Content
2002-02-07		1	Create index, technical terms and reference. Convert to MSRREP V210 XML.		Content

### Versions Overview

Document Part	Date	Editor			
		Company	Version	State	Remarks
From page 28	2002-02-07	Dipl.-Ing- Roman Reimer			
		MEDOC	3	RD	
	28.05.99	Dipl.-Ing. Bernhard Weichel			
		MEDOC	2	rd	
	19.2.1999	Dipl.-Ing. Bernhard Weichel			
		MEDOC	1	rd	

	Structure Principles of MSRNET.DTD MSRNET-EADOC Chapter: SGML Attributes	Page: 212/220 Date: 2002-02-07 State: RD
---	--	--

## Technical Terms

### Code

#### C

code [29](#)

crpctmt.wmf [76](#)

#### E

ENTITY [76](#)

#### O

organization [29](#)

other [29](#)

#### P

product [29](#)

#### S

scale="0.5" [77](#)

SDATA [76](#)

SGML-attribute [29](#), [29](#)

SGMLTAG [29](#)

### Organisations

#### A

ASAP [29](#)

### OTHER

#### D

discrete [175](#)

#### E

ECU [29](#)

#### I

interpolation [175](#)

interpolation-style [175](#)

### Products

#### A

ASAP2 [29](#)

ASCET [165](#)

#### M

MSRNET DTD [2](#)

MSRREP DTD [29](#)

MSRSW DTD [2](#)

### SGML Attributes

#### A

ALIGN [46](#), [68](#), [168](#), [190](#)

ALLOW-BREAK [205](#)

AMOUNT-OF-SUBSTANCE-EXPO [166](#)

#### B

BREAK [41](#)

#### C

CATEGORY [76](#), [76](#)

CHAR [46](#), [68](#), [168](#), [190](#)

CHAROFF [46](#), [68](#), [168](#), [190](#)

COLNAME [46](#), [68](#)

COLNUM [46](#)

COLS [190](#)

COLSEP [46](#), [68](#), [168](#), [183](#), [190](#)

COLWIDTH [46](#)

COMPANY [50](#)

CONNECTION-COMP [55](#)

#### D

DOCORSUB [131](#)

#### E

ELECTRIC-CURRENT-EXPO [166](#)

EXT-ID-CLASS [208](#)

#### F

F-CHILD-TYPE [36](#), [48](#), [51](#), [54](#), [63](#), [154](#), [156](#), [170](#), [207](#)

F-ID-CLASS [37](#), [38](#), [41](#), [48](#), [54](#), [57](#), [59](#), [70](#), [72](#), [90](#), [110](#), [113](#), [116](#), [119](#), [119](#), [124](#), [126](#), [138](#), [140](#), [141](#), [141](#), [143](#), [156](#), [156](#), [157](#), [161](#), [167](#), [170](#), [174](#), [179](#), [182](#), [183](#), [186](#), [192](#), [193](#), [200](#), [203](#), [207](#), [208](#)

F-NAMESPACE [48](#), [98](#), [119](#)

F-PUBID [98](#)

FILENAME [71](#), [76](#), [76](#)

FIT [76](#), [76](#), [77](#)

FLOAT [70](#), [183](#), [205](#)

FRAME [183](#)

#### H

HEIGHT [76](#), [76](#), [77](#), [77](#), [77](#), [77](#), [77](#), [77](#)

HELP-ENTRY [41](#), [59](#), [70](#), [88](#), [136](#), [183](#), [192](#), [193](#), [205](#)

HYNAMES [50](#), [55](#), [120](#), [121](#), [124](#), [127](#), [157](#), [174](#), [180](#), [187](#), [201](#), [203](#), [208](#)



HYTIME [50](#), [55](#), [98](#), [102](#), [120](#), [121](#),  
[124](#), [127](#), [131](#), [157](#), [174](#), [180](#),  
[187](#), [201](#), [203](#), [208](#)

## I

ID [37](#), [38](#), [41](#), [48](#), [54](#), [57](#), [59](#), [70](#),  
[72](#), [87](#), [90](#), [102](#), [110](#), [113](#), [116](#),  
[119](#), [119](#), [124](#), [126](#), [138](#), [140](#),  
[141](#), [141](#), [143](#), [156](#), [156](#), [157](#),  
[161](#), [167](#), [170](#), [174](#), [179](#), [182](#),  
[183](#), [186](#), [192](#), [193](#), [200](#), [203](#),  
[207](#), [208](#)

ID-CLASS [209](#)

ID-REF [209](#)

INTERPOLATION-STYLE [175](#)

ITEM-LABEL-POS [81](#)

## L

LANG-SUBSET [146](#)

LENGTH-EXPO [166](#)

LUMINOUS-INTENSITY-EXPO  
[166](#)

## M

MASS-EXPO [166](#)

MOREROWS [68](#)

## N

NAMEEND [68](#), [168](#)

NAMEST [68](#), [168](#)

NAMETYPE [131](#)

NET-NODE [121](#)

NET-NODE-PORT [120](#)

NET-PORT [124](#)

NET-SIGNAL [127](#)

NOTATION [71](#), [76](#), [77](#)

NOTE-TYPE [132](#)

## O

ORIENT [183](#)

## P

PGWIDE [183](#)

PROG-LANG [146](#)

PUBID [98](#)

## R

ROLE [48](#)

ROTATE [68](#)

ROWSEP [46](#), [68](#), [155](#), [168](#), [183](#),  
[190](#)

## S

S [32](#), [33](#), [34](#), [34](#), [35](#), [36](#), [37](#), [37](#),  
[38](#), [38](#), [39](#), [39](#), [40](#), [41](#), [42](#), [42](#), [43](#),  
[43](#), [44](#), [44](#), [45](#), [45](#), [46](#), [47](#), [48](#), [49](#),  
[50](#), [50](#), [51](#), [52](#), [53](#), [54](#), [54](#), [55](#), [56](#),  
[56](#), [57](#), [57](#), [58](#), [58](#), [59](#), [59](#), [60](#), [60](#),  
[61](#), [61](#), [62](#), [62](#), [63](#), [63](#), [64](#), [64](#), [65](#),  
[66](#), [66](#), [67](#), [68](#), [68](#), [69](#), [70](#), [70](#), [71](#),  
[72](#), [72](#), [73](#), [74](#), [75](#), [76](#), [78](#), [79](#), [79](#),  
[80](#), [80](#), [81](#), [81](#), [82](#), [82](#), [83](#), [84](#), [85](#),  
[86](#), [87](#), [88](#), [89](#), [90](#), [90](#), [91](#), [92](#), [92](#),  
[93](#), [94](#), [94](#), [95](#), [96](#), [96](#), [98](#), [99](#), [99](#),  
[99](#), [100](#), [100](#), [101](#), [102](#), [102](#), [103](#),  
[105](#), [105](#), [105](#), [106](#), [107](#), [107](#),  
[108](#), [110](#), [110](#), [111](#), [111](#), [112](#),  
[113](#), [113](#), [114](#), [114](#), [115](#), [116](#),  
[116](#), [117](#), [117](#), [117](#), [118](#), [118](#),  
[119](#), [119](#), [120](#), [120](#), [121](#), [121](#),  
[122](#), [122](#), [123](#), [124](#), [124](#), [125](#),  
[126](#), [126](#), [127](#), [128](#), [128](#), [129](#),  
[129](#), [130](#), [131](#), [131](#), [132](#), [132](#),  
[133](#), [134](#), [134](#), [135](#), [136](#), [137](#),  
[137](#), [138](#), [138](#), [139](#), [139](#), [139](#),  
[140](#), [140](#), [141](#), [141](#), [142](#), [142](#),  
[143](#), [144](#), [145](#), [146](#), [146](#), [147](#),  
[148](#), [148](#), [149](#), [149](#), [150](#), [151](#),  
[152](#), [152](#), [153](#), [153](#), [154](#), [154](#),  
[155](#), [156](#), [156](#), [157](#), [157](#), [158](#),  
[158](#), [159](#), [159](#), [160](#), [160](#), [161](#),  
[161](#), [162](#), [163](#), [164](#), [164](#), [164](#),  
[165](#), [166](#), [167](#), [168](#), [169](#), [169](#),  
[170](#), [171](#), [171](#), [171](#), [172](#), [172](#),  
[173](#), [174](#), [174](#), [175](#), [176](#), [176](#),  
[177](#), [177](#), [178](#), [179](#), [179](#), [180](#),  
[180](#), [181](#), [181](#), [182](#), [182](#), [183](#),  
[184](#), [184](#), [185](#), [186](#), [187](#), [187](#),

[188](#), [188](#), [189](#), [189](#), [190](#), [191](#),  
[191](#), [192](#), [193](#), [194](#), [194](#), [195](#),  
[195](#), [197](#), [198](#), [198](#), [199](#), [199](#),  
[200](#), [200](#), [201](#), [201](#), [202](#), [202](#),  
[203](#), [203](#), [204](#), [204](#), [205](#), [205](#),  
[207](#), [208](#), [209](#), [210](#)

SAMPLE [157](#)

SCALE [76](#), [77](#), [77](#)

SHORTENTRY [183](#)

SPANNAME [68](#), [168](#)

SW-COMPU-METHOD [174](#)

SW-UNIT [180](#)

## T

TABSTYLE [183](#)

TEAM-MEMBER [187](#)

TGROUPSTYLE [190](#)

THERMODYNAMIC-  
TEMPERATURE-EXPO [166](#)

TIME-EXPO [166](#)

TOCENTRY [183](#)

TOOL [71](#)

TOOL-VERSION [71](#)

type [29](#), [29](#), [29](#), [29](#), [29](#), [29](#), [29](#), [29](#), [66](#),  
[81](#), [91](#), [96](#), [142](#), [195](#), [200](#)

## U

USED-LIBS [146](#)

USER-DEFINED-TYPE [132](#), [196](#)

## V

VALIGN [68](#), [185](#), [189](#), [191](#)

VARIANT-CHAR [201](#)

VARIANT-DEF [203](#)

	Structure Principles of MSRNET.DTD MSRNET-EADOC Chapter: SGML Elements	Page: 214/220 Date: 2002-02-07 State: RD
---	--	--

## W

WIDTH [76](#), [76](#), [77](#), [77](#), [77](#), [77](#), [77](#),  
[77](#)

	<p style="text-align: center;">Structure Principles of MSRNET.DTD MSRNET-EADOC</p> <p>Chapter:           SGML Elements</p>	<p>Page:     215/220</p> <p>Date:     2002-02-07</p> <p>State:    RD</p>
---	--	--

## SGML Elements

### Symbols

short-name [87](#)

### A

abs [143](#), [144](#), [171](#), [171](#)

acceptance-cond [74](#), [84](#), [101](#), [102](#), [184](#), [185](#)

add-info [34](#), [34](#), [34](#), [41](#), [60](#), [70](#), [72](#), [83](#), [89](#), [91](#), [109](#), [113](#), [127](#), [128](#), [132](#), [136](#), [145](#), [183](#), [192](#), [195](#), [205](#)

add-spec [34](#), [34](#), [34](#), [74](#), [84](#), [97](#), [101](#), [102](#), [104](#), [123](#), [130](#), [184](#), [185](#)

address [186](#)

admin-data [41](#), [50](#), [53](#), [56](#), [64](#), [73](#), [74](#), [90](#), [90](#), [97](#), [104](#), [109](#), [117](#), [123](#), [127](#), [130](#), [173](#), [177](#), [179](#), [181](#), [198](#)

### B

baudrate [61](#), [92](#), [108](#), [144](#), [165](#)

bitsize [100](#), [128](#)

bt1-cycles [61](#), [92](#), [108](#), [144](#), [165](#)

byte-order [113](#)

### C

c-code [71](#)

calc-net-message-identifiers [79](#), [112](#), [164](#)

change [66](#), [72](#), [81](#), [95](#), [171](#), [171](#), [195](#), [208](#)

chapter [33](#), [35](#), [41](#), [41](#), [41](#), [60](#), [65](#), [70](#), [72](#), [89](#), [91](#), [92](#), [102](#), [106](#), [111](#), [113](#), [115](#), [132](#), [136](#), [145](#), [162](#), [165](#), [183](#), [192](#), [205](#)

city [186](#)

cmt-int [176](#), [177](#)

cmt-phys [177](#)

cmt-text [176](#)

code [44](#), [200](#), [202](#), [203](#)

coded [45](#), [45](#), [178](#), [178](#)

coded-max [44](#)

coded-min [44](#)

colspec [189](#), [190](#), [190](#)

companies [48](#), [146](#)

company [47](#), [74](#), [92](#), [165](#), [188](#)

company-doc-info [50](#), [50](#), [63](#), [67](#), [142](#)

company-doc-infos [35](#), [49](#)

company-ref [49](#), [51](#)

company-revision-info [50](#), [51](#), [84](#), [153](#), [169](#)

company-revision-infos [51](#), [63](#)

cond [136](#), [144](#)

connection-comp-1 [35](#), [54](#), [55](#), [57](#), [61](#), [64](#), [92](#), [103](#), [137](#), [165](#)

connection-comp-class [53](#)

connection-comp-prms [53](#), [143](#)

connection-comp-ref [160](#), [163](#)

connection-comp-spec-1 [35](#), [57](#), [84](#), [101](#), [104](#), [184](#), [185](#)

connection-comps-1 [54](#), [56](#)

cycle-time [61](#), [92](#), [144](#), [165](#), [194](#)

### D

date [63](#), [159](#)

date-1 [170](#), [207](#)

def [59](#), [136](#)

def-item [59](#), [60](#), [92](#), [165](#)

def-list [33](#), [41](#), [59](#), [65](#), [67](#), [84](#), [85](#), [88](#), [102](#), [103](#), [106](#), [111](#), [113](#), [115](#), [152](#), [162](#), [192](#), [193](#)

demarcation-other-projects [74](#), [84](#), [101](#), [102](#), [184](#), [185](#)

department [186](#)

desc [37](#), [38](#), [53](#), [57](#), [66](#), [70](#), [72](#), [81](#), [90](#), [119](#), [135](#), [138](#), [140](#), [141](#), [141](#),

[143](#), [146](#), [156](#), [157](#), [161](#), [166](#), [171](#), [171](#), [182](#), [184](#), [195](#), [208](#)

dir-hand-over-doc-data [74](#), [84](#), [101](#), [102](#), [184](#), [185](#)

dlc [113](#)

doc-label [49](#)

doc-revision [51](#), [58](#), [64](#), [96](#), [186](#)

doc-revisions [35](#), [63](#)

drawing-number [53](#)

driver-concept [41](#), [60](#), [70](#), [72](#), [89](#), [91](#), [109](#), [132](#), [136](#), [145](#), [183](#), [192](#), [205](#)

### E

e [40](#), [61](#), [81](#), [85](#), [136](#), [151](#), [185](#)

email [186](#)

entity-name [49](#)

entry [60](#), [70](#), [72](#), [89](#), [91](#), [132](#), [136](#), [154](#), [205](#)

error-value [69](#)

error-values [68](#), [128](#)

### F

fax [186](#)

figure [33](#), [41](#), [61](#), [65](#), [67](#), [75](#), [76](#), [83](#), [84](#), [85](#), [88](#), [92](#), [102](#), [103](#), [106](#), [111](#), [113](#), [115](#), [130](#), [152](#), [162](#), [165](#), [192](#), [193](#), [205](#)

file [170](#), [207](#), [207](#)

formula [33](#), [39](#), [41](#), [65](#), [67](#), [75](#), [75](#), [84](#), [85](#), [88](#), [92](#), [102](#), [103](#), [106](#), [111](#), [113](#), [115](#), [152](#), [162](#), [165](#), [188](#), [192](#), [193](#), [205](#)

ft [40](#), [61](#), [81](#), [85](#), [136](#), [151](#), [185](#)

	<p style="text-align: center;">Structure Principles of MSRNED.DTD MSRNED-EADOC</p> <p>Chapter:           SGML Elements</p>	<p>Page:     216/220</p> <p>Date:     2002-02-07</p> <p>State:    RD</p>
---	--	--

## G

general-net-spec 35, 84, 97, 101, 102, 184, 185

general-project-data 33, 34, 35, 48, 60, 62, 82, 84, 101, 134, 137, 148, 149, 150, 151, 158, 182, 184, 185, 205

generic-math 71

graphic 70, 71, 76

## H

homepage 186

## I

identifier 114

identifier-base-address 39

identifier-mask 113

identifier-type 113

ie 40, 61, 81, 85, 92, 93, 136, 151, 171, 171, 185

indent-sample 66, 72, 81, 89, 171, 171, 195, 208

init-value 128

integration-capability 74, 84, 101, 102, 184, 185

interface-circuit 34, 70, 132, 160

introduction 33, 34, 51, 56, 60, 60, 62, 70, 72, 73, 74, 82, 84, 89, 91, 104, 105, 105, 106, 107, 109, 111, 117, 118, 121, 123, 127, 130, 132, 134, 136, 137, 148, 149, 150, 151, 158, 163, 182, 183, 193, 205, 205

item 60, 70, 72, 89, 91, 91, 132, 136, 205

item-label 66, 72, 81, 88, 171, 171, 195, 208

## L

label 87, 99, 119, 132, 135, 145, 146, 159

labeled-item 60, 70, 72, 85, 89, 89, 91, 132, 136, 205

labeled-list 33, 41, 65, 67, 81, 84, 85, 88, 88, 102, 103, 106, 111, 113, 115, 152, 162, 192, 193

language 35

latency-time 61, 92, 144, 165, 194

list 33, 41, 65, 67, 84, 85, 85, 88, 102, 103, 106, 111, 113, 115, 152, 162, 192, 193

locs 97, 101

long-name 37, 38, 41, 48, 53, 57, 59, 70, 71, 76, 81, 87, 90, 101, 110, 112, 115, 119, 119, 124, 126, 138, 140, 141, 141, 143, 156, 156, 157, 161, 166, 173, 179, 182, 183, 186, 192, 193, 195, 200, 203

long-name-1 81, 170, 195, 207, 207

## M

max 143, 144, 171, 171

message-identifier-offset 132

min 143, 144, 171, 171

modification 40, 96, 151

modifications 63, 95

msrnet 34, 35, 73, 91, 104, 123, 147, 165

msrsw 29

multiplex-entry 99, 100, 117

multiplex-signal-list 98, 99

multiplex-signal-set 87, 99, 100, 116

multiplexor 37, 99, 134

multiplexor-value 98

## N

na 33, 34, 56, 60, 62, 73, 74, 82, 104, 105, 105, 106, 107, 109, 111, 117, 118, 121, 123, 127,

130, 134, 137, 148, 149, 150, 151, 158, 163, 182, 205

nameloc 91, 92, 131, 165

ncoi-1 33, 34, 41, 60, 60, 62, 70, 72, 73, 82, 89, 91, 105, 105, 106, 107, 118, 132, 134, 136, 137, 145, 148, 149, 150, 151, 156, 182, 183, 192, 205

ncoi-3 53, 60, 70, 72, 89, 91, 132, 136, 183, 193, 205

net-architecture 34, 35, 56, 84, 97, 101, 109, 130, 184, 185

net-block-modes 84, 101, 102, 123, 184, 185

net-diag-spec 84, 101, 102, 123, 184, 185

net-emc-design 41, 60, 70, 72, 89, 91, 109, 132, 136, 145, 183, 192, 205

net-error-handling 84, 101, 102, 123, 184, 185

net-init-spec 84, 101, 102, 123, 184, 185

net-interface-prms 37, 38, 109, 156, 157, 166, 182

net-interface-spec 34, 35, 65, 84, 101, 104, 106, 108, 184, 185

net-line 92, 111, 112, 165

net-line-desc 41, 60, 70, 72, 89, 91, 110, 132, 136, 145, 183, 192, 205

net-line-spec 84, 101, 112, 130, 184, 185

net-lines 110, 111

net-message 34, 38, 39, 62, 80, 80, 92, 113, 114, 115, 117, 118, 165, 195, 204

net-message-desc 41, 60, 70, 72, 89, 91, 112, 132, 136, 145, 183, 192, 205

net-message-identifier 79, 114, 164



- net-message-identifiers [112](#), [114](#)
- net-message-layout [41](#), [60](#), [70](#), [72](#), [89](#), [91](#), [113](#), [132](#), [136](#), [145](#), [183](#), [192](#), [205](#)
- net-message-set [92](#), [116](#), [118](#), [165](#)
- net-message-sets [115](#), [117](#)
- net-message-signal [99](#), [117](#), [127](#), [134](#), [152](#), [204](#)
- net-message-signals [98](#), [113](#), [116](#)
- net-message-spec [35](#), [84](#), [101](#), [116](#), [123](#), [184](#), [185](#)
- net-messages [113](#), [115](#)
- net-mgmt-spec [84](#), [101](#), [102](#), [123](#), [184](#), [185](#)
- net-node [92](#), [122](#), [122](#), [165](#)
- net-node-port [61](#), [87](#), [92](#), [120](#), [123](#), [165](#)
- net-node-port-ref [161](#), [161](#)
- net-node-ports [119](#), [132](#)
- net-node-ref [152](#), [164](#)
- net-node-spec [84](#), [101](#), [122](#), [130](#), [184](#), [185](#)
- net-node-variants [119](#), [132](#)
- net-nodes [119](#), [121](#)
- net-oper-spec [34](#), [35](#), [84](#), [97](#), [101](#), [105](#), [105](#), [106](#), [107](#), [117](#), [118](#), [127](#), [184](#), [185](#)
- net-port-ref [119](#)
- net-signal [92](#), [129](#), [165](#), [204](#)
- net-signal-class [128](#)
- net-signal-group [92](#), [126](#), [128](#), [129](#), [165](#)
- net-signal-groups [126](#), [127](#)
- net-signal-ref [116](#)
- net-signal-spec [34](#), [35](#), [84](#), [101](#), [123](#), [126](#), [177](#), [181](#), [184](#), [185](#)
- net-signal-spec-variant [34](#), [37](#), [69](#), [82](#), [124](#), [128](#), [172](#), [174](#), [178](#), [204](#)
- net-signal-spec-variants [126](#), [128](#)
- net-signals [124](#), [126](#)
- net-topology-spec [34](#), [35](#), [70](#), [84](#), [101](#), [104](#), [111](#), [121](#), [163](#), [184](#), [185](#), [193](#)
- nmlist [101](#)
- node-type [132](#)
- node-variant [83](#), [94](#), [120](#), [122](#), [131](#), [148](#), [204](#)
- note [33](#), [41](#), [65](#), [67](#), [84](#), [85](#), [87](#), [88](#), [102](#), [103](#), [106](#), [111](#), [113](#), [115](#), [136](#), [152](#), [162](#), [192](#), [193](#)
- number [207](#)
- O**
- objectives [74](#), [84](#), [101](#), [102](#), [184](#), [185](#)
- offset [100](#), [116](#)
- overall-project [61](#), [87](#), [147](#)
- P**
- p [33](#), [41](#), [53](#), [59](#), [65](#), [66](#), [67](#), [72](#), [81](#), [84](#), [85](#), [88](#), [102](#), [103](#), [106](#), [111](#), [113](#), [115](#), [132](#), [152](#), [162](#), [170](#), [171](#), [171](#), [192](#), [193](#), [195](#), [207](#), [208](#), [208](#)
- parallel-designs [74](#), [84](#), [101](#), [102](#), [184](#), [185](#)
- part-number [53](#)
- phase-relations [61](#), [92](#), [144](#), [165](#), [194](#)
- phone [186](#)
- phys [139](#), [139](#), [178](#), [178](#)
- phys-max [139](#)
- phys-min [139](#)
- position [170](#), [207](#)
- powerdown-receive-time [61](#), [92](#), [144](#), [165](#), [194](#)
- powerup-receive-time [61](#), [92](#), [144](#), [165](#), [194](#)
- powerup-transmit-time [61](#), [92](#), [144](#), [165](#), [194](#)
- private-code [142](#)
- private-codes [49](#), [142](#)
- prm [55](#), [61](#), [92](#), [144](#), [145](#), [165](#), [194](#)
- prm-char [32](#), [37](#), [38](#), [53](#), [57](#), [90](#), [94](#), [95](#), [138](#), [140](#), [141](#), [141](#), [143](#), [152](#), [156](#), [157](#), [161](#), [166](#), [182](#), [189](#), [191](#), [197](#), [198](#)
- prms [33](#), [41](#), [65](#), [87](#), [102](#), [106](#), [111](#), [113](#), [115](#), [143](#), [162](#), [192](#)
- prog-code [173](#)
- project [47](#), [61](#), [87](#), [147](#)
- project-data [97](#), [135](#), [146](#)
- project-schedule [74](#), [84](#), [101](#), [102](#), [184](#), [185](#)
- protocol-conformance [132](#)
- protocols [74](#), [84](#), [101](#), [102](#), [184](#), [185](#)
- publisher [207](#)
- purchasing-cond [74](#), [84](#), [101](#), [102](#), [184](#), [185](#)
- R**
- reason [66](#), [72](#), [81](#), [95](#), [171](#), [171](#), [195](#), [208](#)
- reason-order [74](#), [84](#), [101](#), [102](#), [184](#), [185](#)
- receivers [116](#), [121](#)
- remark [60](#), [70](#), [72](#), [89](#), [91](#), [132](#), [136](#), [144](#), [205](#)
- revision-label [51](#)
- role [154](#)
- roles [153](#), [186](#)
- row [67](#), [184](#), [189](#), [190](#)

**S**

sample [92](#), [102](#), [158](#), [165](#)  
sample-point [61](#), [92](#), [108](#), [144](#), [165](#)  
sample-rate [61](#), [92](#), [108](#), [144](#), [165](#)  
sample-ref [159](#)  
sample-spec [74](#), [84](#), [101](#), [158](#), [184](#),  
[185](#)  
samples [156](#), [158](#)  
schedule [58](#), [157](#), [184](#)  
schematic-element [87](#), [160](#), [199](#)  
schematic-elements [83](#), [159](#)  
segment [55](#), [161](#), [161](#), [163](#), [204](#)  
segment-end-nodes [120](#), [120](#), [160](#)  
segment-length [61](#), [92](#), [144](#), [160](#),  
[165](#)  
segmentation-desc [41](#), [60](#), [70](#), [72](#),  
[89](#), [91](#), [132](#), [136](#), [145](#), [163](#), [183](#),  
[192](#), [205](#)  
segmentation-spec [55](#), [84](#), [101](#),  
[130](#), [162](#), [163](#), [184](#), [185](#)  
segments [160](#), [163](#)  
sender [121](#), [164](#), [204](#)  
senders [39](#), [114](#), [164](#)  
short-name [37](#), [38](#), [41](#), [48](#), [53](#), [57](#),  
[59](#), [70](#), [71](#), [90](#), [97](#), [101](#), [110](#), [112](#),  
[115](#), [119](#), [119](#), [124](#), [126](#), [138](#),  
[140](#), [141](#), [141](#), [143](#), [156](#), [156](#),  
[157](#), [161](#), [165](#), [166](#), [170](#), [173](#),  
[179](#), [182](#), [183](#), [186](#), [192](#), [193](#),  
[200](#), [203](#), [207](#), [207](#)  
si-unit [179](#)  
sjw [61](#), [92](#), [108](#), [144](#), [165](#)  
spanspec [190](#)  
state [51](#)  
state-1 [170](#), [207](#)  
std [58](#), [71](#), [93](#), [136](#), [140](#), [165](#), [169](#),  
[171](#), [185](#)  
sub [32](#), [40](#), [61](#), [80](#), [81](#), [85](#), [94](#), [95](#),  
[136](#), [151](#), [179](#), [185](#), [189](#), [191](#),  
[197](#), [198](#)

subtitle [170](#)  
sup [32](#), [40](#), [61](#), [80](#), [81](#), [85](#), [94](#), [95](#),  
[136](#), [151](#), [179](#), [185](#), [189](#), [191](#),  
[197](#), [198](#)  
sw-asap-6-prm-method [173](#)  
sw-base-type [128](#)  
sw-compu-generic-math [173](#)  
sw-compu-method [35](#), [92](#), [146](#),  
[165](#), [172](#), [173](#), [175](#), [175](#), [177](#),  
[180](#)  
sw-compu-method-ref [128](#)  
sw-compu-method-table [173](#), [177](#)  
sw-compu-method-text [173](#), [176](#)  
sw-compu-method-text-pair [42](#),  
[43](#), [175](#)  
sw-compu-method-value-pair [42](#),  
[43](#), [175](#)  
sw-compu-methods [35](#), [127](#), [173](#)  
sw-limits [44](#), [44](#), [128](#), [139](#), [139](#)  
sw-param-value-block [87](#)  
sw-prm [32](#)  
sw-unit [35](#), [92](#), [165](#), [165](#), [179](#), [180](#),  
[180](#), [181](#), [181](#)  
sw-unit-display [171](#), [171](#), [179](#)  
sw-unit-from-ref-method [179](#)  
sw-unit-ref [173](#), [179](#)  
sw-unit-to-ref-method [179](#)  
sw-units [35](#), [127](#), [179](#)  
sync-edge [61](#), [92](#), [108](#), [144](#), [165](#)  
system-overview [74](#), [84](#), [101](#), [102](#),  
[184](#), [185](#)

**T**

table [33](#), [41](#), [65](#), [76](#), [84](#), [92](#), [102](#),  
[103](#), [106](#), [111](#), [113](#), [115](#), [162](#),  
[165](#), [190](#), [192](#), [193](#)  
tbd [33](#), [34](#), [56](#), [60](#), [61](#), [62](#), [73](#), [74](#),  
[82](#), [104](#), [105](#), [105](#), [106](#), [107](#), [109](#),  
[111](#), [117](#), [118](#), [121](#), [123](#), [127](#),  
[130](#), [134](#), [137](#), [148](#), [149](#), [150](#),

[151](#), [158](#), [159](#), [163](#), [182](#), [187](#),  
[205](#)

tbody [154](#), [190](#)

tbr [33](#), [34](#), [56](#), [60](#), [62](#), [66](#), [72](#), [73](#),  
[74](#), [81](#), [82](#), [104](#), [105](#), [105](#), [106](#),  
[107](#), [109](#), [111](#), [117](#), [118](#), [121](#),  
[123](#), [127](#), [130](#), [134](#), [137](#), [148](#),  
[149](#), [150](#), [151](#), [158](#), [163](#), [170](#),  
[171](#), [171](#), [182](#), [195](#), [205](#), [207](#),  
[208](#), [208](#)

team-member [35](#), [42](#), [61](#), [61](#), [66](#),  
[70](#), [78](#), [92](#), [138](#), [154](#), [165](#), [188](#),  
[210](#)

team-member-ref [63](#), [187](#)

team-member-refs [184](#), [186](#)

team-members [48](#), [186](#)

tex-math [71](#)

text [144](#), [171](#), [171](#)

tfoot [46](#), [154](#), [190](#)

tgroup [46](#), [168](#), [183](#), [184](#), [189](#), [191](#)

thead [46](#), [154](#), [190](#)

tol [143](#), [144](#), [171](#), [171](#)

topic-1 [33](#), [41](#), [60](#), [65](#), [70](#), [72](#), [89](#),  
[91](#), [92](#), [102](#), [106](#), [111](#), [113](#), [115](#),  
[132](#), [136](#), [145](#), [162](#), [165](#), [183](#), [205](#)

topic-2 [60](#), [70](#), [72](#), [84](#), [89](#), [91](#), [92](#),  
[103](#), [132](#), [136](#), [165](#), [183](#), [205](#)

topology-type [130](#)

transmission-prms [57](#), [90](#), [138](#),  
[140](#), [141](#), [141](#), [143](#), [195](#)

transmission-spec [34](#), [113](#), [194](#)

tt [40](#), [61](#), [81](#), [85](#), [92](#), [93](#), [136](#), [151](#),  
[185](#)

typ [143](#), [144](#), [171](#), [171](#)

**U**

unit [144](#), [171](#), [171](#)

used-languages [35](#)

	<p style="text-align: center;">Structure Principles of MSRNET.DTD MSRNET-EADOC</p> <p>Chapter:           Tools</p>	<p>Page:    219/220 Date:     2002-02-07 State:    RD</p>
---	--	---

## V

v [159](#)  
value [202](#)  
variant-char [44](#), [92](#), [165](#), [202](#)  
variant-char-assign [201](#), [201](#), [202](#)  
variant-char-assigns [200](#), [203](#)  
variant-char-ref [200](#)  
variant-char-value [44](#), [199](#), [200](#)  
variant-chars [200](#), [205](#)  
variant-def [44](#), [92](#), [165](#), [201](#), [204](#)  
variant-def-ref [204](#)  
variant-def-refs [112](#), [116](#), [124](#),  
[128](#), [132](#), [160](#), [164](#), [203](#)

variant-defs [203](#), [205](#)

variant-spec [74](#), [84](#), [101](#), [184](#), [185](#),  
[202](#), [204](#)

verbatim [33](#), [41](#), [65](#), [67](#), [70](#), [71](#), [84](#),  
[85](#), [88](#), [102](#), [103](#), [106](#), [111](#), [113](#),  
[115](#), [152](#), [162](#), [192](#), [193](#)

## X

xdoc [58](#), [71](#), [93](#), [133](#), [136](#), [140](#),  
[149](#), [165](#), [169](#), [185](#)

xfile [71](#), [93](#), [136](#), [165](#), [185](#)

xref [40](#), [61](#), [81](#), [85](#), [136](#), [151](#), [185](#)

## Z

zip [186](#)

## Tools

### A

ASAP [165](#)

### E

entity manager [76](#)

### R

rendition system [76](#), [76](#), [76](#)

### S

SGML Application [77](#)

SGML tool [76](#)

SGML tools [67](#)



## Configuration Parameters

### **Company (—company)**

MEDOC

### **Language (—lang)**

English

### **Treatment of content for Xrefs (—xrefcontent)**

Xref classes are shown

### **Specifying 'See' for XRefs**

'See' is to be inserted for xrefs

### **Treatment of filenames in graphics (—figname)**

Filenames for graphics are shown

### **Treatment of width and height attributes of graphics (—figdimension)**

Width and height of graphics is not considered

### **Titlepage Graphic (—graphic)**

No title graphic specified

### **Logo Graphic (—head-logo)**

msrreportlogo.eps

### **Fixtext File (—fixtext)**

C:\Programme\Medoc\Metapage\mmapps\msrrep\lib\msrrep\_ft.xml

### **Output of Local Administrative Data (—admindata)**

Local administrative data is output

### **Filename**

C:\Docs\MEDOC\MSRNET\docs\en\eadoc\msrnet-eadoc\_V210.xml

### **MetaMorphosis-Version**

3.2

### **Form Version**

2.0 (MetaPage)

### **Date**

11/02/2002 14:15:23