ISO/TS 13584-35:2010-07 (E)

Industrial automation systems and integration - Parts library - Part 35: Implementation resources: Spreadsheet interface for parts library

Contents

Page

1 Scope 1
2 Normative references 3
3 Terms and definitions 4
4 Use scenario for spreadsheet interface 9
4.1 Spreadsheet representation of dictionary or library 9
4.2 Use scenario of dictionary parcelling format 11
4.3 Use scenario of library parcelling format 11
5 Structure of the spreadsheet interface 12
5.1 Meta-dictionary approach 12
5.2 Identification structure 13
5.3 Structure of a parcelling sheet 15
5.4 File name extension 15
5.5 Library use of parcelling format 16
5.6 Header section 17
5.6.1 Categories of instructions 17
5.6.2 Mandatory 17
5.6.3 Optional - functional 17
5.6.4 Reserved - informative 17
5.6.5 Comment line 18
5.6.6 Reserved words 18
5.7 Instruction column 18
5.7.1 General rule 18
5.7.2 Class ID 18
5.7.3 Preferred name of the class 19
5.7.4 Definition of the class 19
5.7.5 Note of the class 20
5.7.6 Alternate class ID 20
5.7.7 Source language 20
5.7.8 Parcel identifier 21
5.7.9 Parcel conformance class identifier 21
5.7.10 Default supplier 22
5.7.11 Property ID 22
5.7.12 Preferred name of the property 23
5.7.13 Definition 24
5.7.14 Note 25
5.7.15 Data type 26
5.7.16 Unit of measurement 27
5.7.17 Requirement 27
5.7.18 Alternative units of measurement 28
5.7.19 IDs of alternative units of measurement 29
5.7.20 Alternate property ID 29
5.7.21 ID for the unit of measurement 30
5.7.22 Property value format 31
5.7.23 Identifier encoding 31
5.7.24 Default ID encoding 32
5.8 Data section for instances 33
5.8.1 General 33

5.8.2 Enumeration types, or non quantitative types 33
5.8.3 Level type 34
5.8.4 String type 34
5.8.5 Translatable string type 34
5.8.6 Boolean type 35
5.8.7 Class instance type (Class reference type) 35
5.8.8 Aggregate type 36
5.8.9 Named type 39
5.8.10 Entity instance type 39
5.9 Dictionary use of parcelling format 40
5.9.1 Dictionary as an instance of meta-dictionary 40
5.9.2 Identification of conjunctive parcels 42
5.9.3 Roles and definition of dictionary parcels 42
5.9.4 Properties of meta-dictionary 44

6 Mechanism for structural extension 56
6.1 General 56
6.2 Example 56

7 Conformance classes for parcelling spreadsheet 56

Annex A (normative) Information object registration 59

Annex B (normative) Meta-dictionary file 60

Annex C (normative) Reserved words 61

Annex D (normative) Description examples of data types 65

Annex E (normative) Meta-properties of normative meta-classes 67

Annex F (informative) Meta-properties of optional meta-classes 114

Annex G (informative) Meta-class properties mapped with DIN 4002 126

Annex H (informative) Meta-dictionary updates 140

Bibliography 141

Index 143

Figures Figure 1 -- Parcel use scenario 10

Figure 2 -- Schematic diagram of meta-dictionary approach 13

Figure 3 -- Structure of a parcelling sheet 15

Figure 4 -- Display example of property ID 23

Figure 5 -- Display example of preferred name 24

Figure 6 -- Display example of definition 25

Figure 7 -- Display example of data type 26

Figure 8 -- Display example of unit of measurement 27

Figure 9 -- Display example of key 28

Figure 10 -- Display example of unit of measurement 28

Figure 11 -- Display example of unit of measurement 29

Figure 12 -- Display example of alternate property ID 30
Figure 13 -- Display example of ID for the unit of measurement 30
Figure 14 -- Display example of value format 31
Figure 15 -- Display example of ID encoding specification 31
Figure 16 -- Display example of ID encoding specification 32
Figure 17 -- Display example of ENUM_INT_TYPE or ENUM_CODE_TYPE 33
Figure 18 -- Display example of LEVEL_TYPE 34
Figure 19 -- Display example of TRANSLATABLE_STRING_TYPE 34
Figure 20 -- Display example of BOOLEAN_TYPE 35
Figure 21 -- Display example of CLASS_INSTANCE_TYPE 35
Figure 22 -- Display example of SET OF STRING_TYPE 36
Figure 23 -- Display example of LIST OF STRING_TYPE 37
Figure 24 -- Display example of LIST OF TRANSLATABLE_STRING_TYPE 37
Figure 25 -- Display example of SET OF LEVEL OF INT_MEASURE_TYPE 38
Figure 26 -- Display example of SET OF SET OF STRING_TYPE 39
Figure 27 -- Configuration of a dictionary parcel 40
Tables Table 1 -- Description of the property code 23
Table 2 -- Example of correspondence within multiple languages 38
Table 3 -- Meta-classes that constitute a meta-dictionary 43
Table 4 -- Conformance classes for ISO 13584-35 58
Table C.1 -- Key words for instruction in class header 61
Table C.2 -- Key words for instruction in schema header 63
Table D. 1 -- Description examples of data types 65
Table E.1 -- Meta-properties of dictionary meta-class 68
Table E.2 -- Meta-properties of class meta-class 74
Table E.3-- Meta-properties of property meta-class 84
Table E.4 -- Meta-properties of supplier meta-class 93
Table E.5 -- Meta-properties of enumeration meta-class 97
Table E.6 -- Meta-properties of datatype meta-class 102
Table E.7 -- Meta-properties of document meta-class 107
Table F.1 -- Meta-properties of object meta-class 115

Table F.2 -- Meta-properties of UoM meta-class 116

Table F.3 -- Meta-properties of terminology meta-class 121

Table G.1 -- Meta-properties for the definition of a class, mapped with DIN 4002 127

Table G.2 -- Meta-properties for the definition of a property, mapped with DIN 4002 130

Table G.3 -- Meta-properties for the definition of an enumeration, mapped with DIN 4002 133

Table G.4 -- Meta-properties for the definition of a data type, mapped with DIN 4002 135

Table G.5 -- Meta-properties for the definition of a UoM, mapped with DIN 4002 138