ISO 18629-11 :2005-10 (E)

Industrial automation systems and integration_- Process specification language_- Part_11: PSL core

Contents

Page

1 Scope ... 1
2 Normative references ... 1
3 Terms, definitions, and abbreviations ... 2
3.1 Terms and definitions ... 2
3.2 Abbreviations ... 7
4 ISO 18629 general ... 7
5 Language specification syntax ... 8
5.1 Basic symbols and Syntactic Categories ... 8
5.2 Lexicon ... 9
5.3 Grammar ... 9
5.4 Language ... 10
6 Basic elements of the PSL Core ... 10
6.1 Basic features ... 10
6.2 Primitive lexicon of the PSL-Core ... 11
6.2.1 Primitive categories of the PSL-Core ... 11
6.2.1.1 activity ... 11
6.2.1.2 activity_occurrence ... 11
6.2.1.3 object ... 12
6.2.1.4 timepoint ... 12
6.2.2 Individuals of the PSL-Core ... 13
6.2.2.1 inf- ... 13
6.2.2.2 inf+ ... 13
6.2.3 Primitive relations of the PSL-Core ... 13
6.2.3.1 before ... 13
6.2.3.2 occurrence_of ... 13
6.2.3.3 participates_in ... 14
6.2.4 Primitive functions of the PSL-Core ... 14
6.2.4.1 beginof ... 14
6.2.4.2 endof ... 14
6.2.5 Theories required by the PSL-Core ... 15
6.3 Defined lexicon of the PSL-Core ... 15
6.3.1 Formal definitions of the PSL-Core ... 15
6.3.1.1 between ... 15
6.3.1.2 beforeEq ... 15
6.3.1.3 betweenEq ... 15
6.3.1.4 exists_at ... 16
6.3.1.5 is_occurring_at ... 16
6.4 Axioms ... 16
6.4.1 Axiom 1 ... 16
6.4.2 Axiom 2 ... 16
6.4.3 Axiom 3 ... 17
6.4.4 Axiom 4 ... 17
6.4.5 Axiom 5 ... 17
6.4.6 Axiom 6 ... 17
6.4.7 Axiom 7 ... 17
6.4.8 Axiom 8 ... 18
6.4.9 Axiom 9 ... 18
6.4.10 Axiom 10 ... 18
6.4.11 Axiom 11 ... 19
6.4.12 Axiom 12 ... 19

6.4.13 Axiom 13 19
6.4.14 Axiom 14 19
6.4.15 Axiom 15 20
6.4.16 Axiom 16 20
6.4.17 Axiom 17 20
7 Conformance to PSL-Core 21
7.1 Conformance of Ontologies 21
7.2 Conformance of Process Descriptions 21

Annex A (Normative) ASN.1 Identifier of ISO 18629-11 22
Annex B (Informative) KIF Syntax and Semantics 23
Annex C (Informative) Example of process description using PSL-Core 31
Annex D (informative) BNF Conventions 40

Figures

Figure C.1 : TOP level process for manufacturing a GT350 [9] 35
Figure C.2: PROCESS for manufacturing the 350–Engine [9] 36
Figure C.3: PROCESS for manufacturing the 350–Block [9] 37
Figure C.4: PROCESS for manufacturing the 350–Harness [9] 38
Figure C.5: PROCESS for manufacturing the 350–Wire [9] 38
Figure C.6: PROCESS for manufacturing the x50–Wire 38

Table

Table C.1: GT-350 Product Structure Table 33