

# ISO/IEC 24707:2007-10 (E)

## Information technology - Common Logic (CL): a framework for a family of logic-based languages

---

<b>Contents</b>		<b>Page</b>
Foreword .....		vi
Introduction .....		vii
<b>1</b>	<b>Scope .....</b>	<b>1</b>
<b>2</b>	<b>Normative references .....</b>	<b>2</b>
<b>3</b>	<b>Terms and definitions .....</b>	<b>2</b>
<b>4</b>	<b>Symbols and abbreviations .....</b>	<b>5</b>
4.1	Symbols .....	5
4.2	Abbreviations .....	6
<b>5</b>	<b>Requirements and design overview .....</b>	<b>6</b>
5.1	Requirements .....	6
5.2	A family of notations .....	8
<b>6</b>	<b>Common Logic abstract syntax and semantics .....</b>	<b>8</b>
6.1	Common Logic abstract syntax .....	8
6.2	Common Logic semantics .....	13
6.3	Importing and identification on a network .....	16
6.4	Satisfaction, validity and entailment .....	18
6.5	Sequence markers, recursion and argument lists: discussion .....	18
6.6	Special cases and translations between dialects .....	19
<b>7</b>	<b>Conformance .....</b>	<b>20</b>
7.1	Dialect conformance .....	20
7.2	Application conformance .....	22
7.3	Network conformance .....	22
<b>Annex A (normative) Common Logic Interchange Format (CLIF) .....</b>		<b>23</b>
A.1	Introduction .....	23
A.2	CLIF Syntax .....	24
A.3	CLIF semantics .....	29
A.4	CLIF conformance .....	32
<b>Annex B (normative) Conceptual Graph Interchange Format (CGIF) .....</b>		<b>33</b>
B.1	Introduction .....	33
B.2	CG Core Syntax and Semantics .....	39
B.3	Extended CGIF Syntax .....	45
B.4	CGIF conformance .....	51
<b>Annex C (normative) eXtended Common Logic Markup Language (XCL) .....</b>		<b>54</b>
C.1	Introduction .....	54
C.2	XCL Syntax .....	54
C.3	XCL Semantics .....	72
C.4	XCL Conformance .....	72

<b>Bibliography .....</b>	<b>73</b>
<b>Figures Page Figure 1 -- Structure of a text and the taxonomy of the phrase category text .....</b>	<b>10</b>
<b>Figure 2 -- Abstract syntax of sentence and its sub-categories .....</b>	<b>10</b>
<b>Figure 3 -- Abstract syntax of a module .....</b>	<b>10</b>
<b>Figure 4 -- Abstract syntax of a quantified sentence .....</b>	<b>11</b>
<b>Figure 5 -- Abstract syntax of a boolean sentence .....</b>	<b>11</b>
<b>Figure 6 -- Abstract syntax of an atom .....</b>	<b>12</b>
<b>Figure 7 -- Abstract syntax of a term and term sequence .....</b>	<b>12</b>
<b>Figure B.1 -- CG display form for John is going to Boston by bus .....</b>	<b>33</b>
<b>Figure B.2 -- CG display form for "If a cat is on a mat, then it is a happy pet" .....</b>	<b>34</b>
<b>Figure B.3 -- CL functions represented by actor nodes .....</b>	<b>35</b>