

ISO/IEC TR 24763:2011-06 (E)

Information technology - Learning, education and training - Conceptual Reference Model for Competency Information and Related Objects

Contents		Page
Foreword		vi
0	Introduction	vii
0.1	General	vii
0.2	Areas of applicability	viii
0.3	Overview of the structure of this Technical Report	ix
0.4	Acknowledgement	ix
1	Scope	1
1.1	Purpose	1
1.2	Primary role	1
1.3	Aspects not currently addressed	2
2	Terms and definitions	2
3	Symbols and abbreviated terms	4
4	Introduction to the ITLET Conceptual Reference Model for Competency Information and Related Objects	5
5	Classes of the ITLET Conceptual Reference Model for Competency Information and Related Objects	7
5.1	Introduction and approach	7
5.2	Identification of classes and their descriptions	8
6	Properties of the classes within the ITLET Conceptual Reference Model for Competency Information and Related Objects	8
6.1	Introduction and approach	8
6.2	Identification of properties and their descriptions	9
7	How to use the Conceptual Model Reference Model	10
7.1	Overview	10
7.2	Sharing competency information across Digital Services Supply Chains	10
7.3	Aggregating Competency Information using Competency Information Objects	11
7.4	Deriving DSSC Query Requirements from the ITLET CRM	12
7.5	Deriving interoperability requirements for DSSC using the ITLET CRM	16
7.5.1	Constructing CRM Instances for DSSC Links	16
7.5.2	Determining interoperability requirements from the CRM	16
7.5.3	Sharing competency information using a thesaurus	16
7.6	Using metadata to build Competency Information Objects	18
8	Representation of competency information within information technology systems used for learning, education, and training	19
8.1	Brief Overview	19
8.2	Challenges of standardization for competency information within the context of ITLET	20
8.3	The nature of competency information considered within the context of ITLET and the labels of competency information	21
9	Potential areas for further international standardization	23
Annex A (informative) Development of models from the ITLET Conceptual Reference Model		25

A.1	General	25
A.2	How to develop a specific use case using the ITLET Conceptual Reference Model	25
A.2.1	Gather representative diagrams and information structures	25
A.2.2	Develop use case description(s)	25
A.2.3	Determine aspects of IT system that will be analyzed using the CRM	25
A.2.4	Prepare new or review existing lexical statement representations	25
A.2.5	Create diagram representations for each lexical statement	26
A.2.6	Assemble diagram representations or component diagram representations	26
A.2.7	Compare diagrams with CRM	26
A.3	Use case template	26
A.3.1	Background information components	26
A.3.2	Use case components	27
A.3.3	Additional information component -- Information relevant to understanding the use case	28
Annex B (informative) Specific example based on a use case submitted		29
B.1	Luxembourg use case	29
B.2	The Luxembourg information models	32
Annex C (informative) Background information related to the development of the CRM		36
Annex D (informative) Use cases submitted by National Bodies		40
D.1	Use cases submitted by National Bodies	40
D.2	SC36 WG3 Use case template	42
D.2.1	Background Information	42
D.2.2	Use case	43
D.2.3	Additional information relevant to understanding the use case	44
Bibliography		45
LIST OF FIGURES Figure 1 -- The ITLET Conceptual Reference Model for Competency Information and Related Objects		7
Figure 2 -- Relationship between competency information, competency information records, and a competency information object		11
Figure 3 -- An example of aggregating competency information from four providers of a DSSC into a competency information object		13
Figure 4 -- An information model structure based on the CRM for Competency Information and Related Objects		15
Figure 5 -- Using a competency thesaurus to exchange information and construct a competency information object		17
Figure 6 -- Examples of identification of competency information that is used and expressed by many stakeholders in diverse ways		22
Figure 7 -- Luxembourg use case - Step 1: Elaborating the job profile		29
Figure 8 -- Luxembourg use case - Step 2: Designing the curriculum		30
Figure 9 -- Luxembourg use case - Step 3: Delivering the course		30
Figure 10 -- Luxembourg use case - Step 4: Attending the course		31
Figure 11 -- Luxembourg use case - Step 5: Assessing competencies		31
Figure 12 -- Competency information record 1		32
Figure 13 -- Competency information record 2		33

Figure 14 -- Competency information record 3	34
Figure 15 -- Initial set of classes in the ITLET Conceptual Reference Model based on JTC1 SC36 definition of competency	36
Figure 16 -- First revision of classes and properties in developing the ITLET Conceptual Reference Model for Competency Information and Related Objects based on use case analyses	38
Figure 17 -- Second revision to include new classes and properties in developing the ITLET Conceptual Reference Model for Competency Information and Related Objects based on use case analyses	39
LIST OF TABLES Table 1 -- Presence of CRM classes within various implementations, specifications, and standards	19
Table 2 -- Use cases submitted by National Bodies	40