

ISO/IEC 19773:2011-09 (E)

Information technology - Metadata Registries (MDR) modules

Contents		Page
Foreword		ix
Introduction		x
1	Scope	1
2	Normative references	1
3	Terms, definitions, and abbreviations	1
3.1	Signifiers, referencing, and their associations	1
3.2	Fundamental datatypes	3
3.3	Generic implementation-related concepts	4
3.4	Terminology applicable to more than one module	5
3.5	Reserved for future use	5
3.6	Reserved for future use	5
3.7	Reserved for future use	5
3.8	Reserved for future use	5
3.9	Reserved for future use	5
3.10	Module 10-specific terminology: Data structure for reference-or-literal (reflit)	5
3.11	Module 11-specific terminology: Data structure for multiple internationalized/localized values and data	6
3.12	Module 12-specific terminology: Data structure for multiple internationalized/localized strings and texts	6
3.13	Module 13-specific terminology: Data structure for slot tuple	6
3.14	Module 14-specific terminology: Data structure for unstructured table of slot tuples	7
3.15	Module 15-specific terminology: Data structure for reified relationships and relationships systems	7
3.16	Module 16-specific terminology: Data structure for UPU postal data	7
3.16.1	Terminology from UPU S42a-6	7
3.16.2	Postal address segments	13
3.16.3	Postal address constructs	14
3.16.4	Postal address elements	16
3.16.5	Postal address element sub-types	26
3.16.6	Other terms and definitions	29
3.17	Module 17-specific terminology: Data structure for ITU-T E.164 phone number data	29
3.18	Module 18-specific terminology: Data structure for who-what-where-when-why-how (W5H) event data	30
3.19	Module 19-specific terminology: Data structure for entity-person-group (EPG) contact data	30
3.20	Module 20-specific terminology: Data structure for entity-person-group (EPG) security credentials data	30
3.21	Module 21-specific terminology: Data structure for entity-person-group (EPG) relationships and grouping data	31
4	Structure of this International Standard	31
5	Bindings	32
6	Conformance	32
7	Designation of internationally standardized items	32
7.1	Designation suffix syntax	32

7.2	Designation suffixes for profiles	32
8	Profile designations	33
9	Clause reserved for future use	33
10	Module 10: Data structure for reference-or-literal (reflit)	33
10.1	Introduction to module	33
10.2	Scope of module	33
10.3	Functional capabilities	33
10.4	Abstract model	34
10.4.1	General	34
10.4.2	reflit(of_type)	35
10.4.3	reference_type(of_type)	36
10.4.4	literal_type(of_type)	38
10.5	Computational description and datatypes	39
10.5.1	General	39
10.5.2	reflit(of_type)	39
10.5.3	reference_type(of_type)	40
10.5.4	literal_type(of_type)	40
10.6	Additional provisions for bindings	40
10.7	Additional provisions for conformity	41
11	Module 11: Data structure for multiple internationalized/localized values and data	41
11.1	Introduction to module	41
11.2	Scope of module	41
11.3	Functional capabilities	41
11.3.1	General	41
11.3.2	The multivalue data structure	41
11.3.3	The multidata data structure	42
11.4	Abstract model	43
11.4.1	General	43
11.4.2	multivalue	43
11.4.3	multidata	45
11.5	Computational description and datatypes	46
11.5.1	General	46
11.5.2	multivalue	46
11.5.3	multidata	46
11.6	Additional provisions for bindings	47
11.7	Additional provisions for conformity	47
12	Module 12: Data structure for multiple internationalized/localized strings and texts	47
12.1	Introduction to module	47
12.2	Scope of module	47
12.3	Functional capabilities	47
12.3.1	General	47
12.3.2	The multistring data structure	47
12.3.3	The multitext data structure	48
12.4	Abstract model	50
12.4.1	General	50
12.4.2	multistring	50
12.4.3	multitext	52
12.5	Computational description and datatypes	53
12.5.1	General	53
12.5.2	multistring	53
12.5.3	multitext	53
12.6	Additional provisions for bindings	54
12.7	Additional provisions for conformity	54
13	Module 13: Data structure for slot tuple	54
13.1	Introduction to module	54
13.2	Scope of module	54

13.3	Functional capabilities	54
13.4	Abstract model	55
13.4.1	General	55
13.4.2	slot_tuple components	55
13.4.3	slot_tuple and variants	56
13.4.4	slot_tuple	57
13.4.5	slot_tuple_as_ttt	57
13.4.6	slot_tuple_as_ttrl	58
13.4.7	slot_tuple_as_ttmd	58
13.4.8	slot_tuple_as_bbb	58
13.4.9	slot_tuple_as_btb	58
13.4.10	slot_tuple_as_btmd	59
13.5	Computational description and datatypes	59
13.5.1	General	59
13.5.2	Datatypes	59
13.6	Additional provisions for bindings	60
13.7	Additional provisions for conformity	60
14	Module 14: Data structure for unstructured table of slot tuples	60
14.1	Introduction to module	60
14.2	Scope of module	60
14.3	Functional capabilities	60
14.4	Abstract model	61
14.4.1	General	61
14.4.2	slot_tuple_table and related classes	61
14.5	Computational description and datatypes	61
14.5.1	General	61
14.5.2	Datatypes	61
14.6	Additional provisions for bindings	62
14.7	Additional provisions for conformity	62
15	Module 15: Data for reified relationships and relationship systems	62
15.1	Introduction to module	62
15.2	Scope of module	62
15.3	Functional capabilities	62
15.4	Abstract model	62
15.4.1	General	62
15.4.2	The reified_relationship_system and the reified_relationship	63
15.5	Computational description and datatypes	63
15.5.1	General	63
15.5.2	reified_relationship_system	63
15.5.3	reified_relationship	64
15.5.4	object_role_pair	64
15.6	Additional provisions for bindings	64
15.7	Additional provisions for conformity	64
16	Module 16: Data structure for UPU postal data	64
16.1	Introduction to module	64
16.2	Scope of module	65
16.3	Functional capabilities	65
16.4	Abstract model	65
16.4.1	General	65
16.4.2	Postal Address	65
16.4.3	Unrendered postal data	66
16.4.4	Contextualized Rendered Postal Address	71
16.5	Computational description and datatypes	72
16.5.1	General	72
16.5.2	postal_address	72
16.5.3	unrendered_postal_address_class	72
16.5.4	contextualized_rendered_postal_address_class	73
16.6	Additional provisions for bindings	73
16.7	Additional provisions for conformity	73

17	Module 17: Data structure for ITU-T E.164 phone number data	74
17.1	Introduction to module	74
17.2	Scope of module	74
17.3	Functional capabilities	74
17.4	Abstract model	75
17.4.1	General	75
17.4.2	phone_number_class	76
17.4.3	phone_number_element	76
17.5	Computational description and datatypes	77
17.5.1	General	77
17.5.2	phone_number_class	77
17.5.3	phone_number_element	77
17.6	Additional provisions for bindings	77
17.7	Additional provisions for conformity	77
18	Module 18: Data structure for who-what-where-when-why-how (W5H) event data	78
18.1	Introduction to module	78
18.2	Scope of module	78
18.3	Functional capabilities	78
18.4	Abstract model	79
18.4.1	General	79
18.4.2	w5h_event_class	79
18.4.3	w5h_event_extent	79
18.4.4	extent_descriptor	80
18.5	Computational description and datatypes	80
18.5.1	General	80
18.5.2	w5h_event_class	80
18.5.3	w5h_event_extent	81
18.5.4	event_descriptor	81
18.6	Additional provisions for bindings	82
18.7	Additional provisions for conformity	82
19	Module 19: Data structure for entity-person-group (EPG) contact data	82
19.1	Introduction to module	82
19.2	Scope of module	82
19.3	Functional capabilities	82
19.4	Abstract model	83
19.4.1	General	83
19.4.2	contact_data_class	84
19.4.3	event_localized_contact_data	84
19.5	Computational description and datatypes	84
19.5.1	General	84
19.5.2	contact_data_class	85
19.5.3	event_localized_contact_data	85
19.6	Additional provisions for bindings	85
19.7	Additional provisions for conformity	85
20	Module 20: Data structure for entity-person-group (EPG) security credentials data	85
20.1	Introduction to module	85
20.2	Scope of module	86
20.3	Functional capabilities	86
20.4	Conceptual model and object model	87
20.4.1	General	87
20.4.2	security_credentials_data	87
20.4.3	event_localized_security_credentials_data	87
20.4.4	security_credential_element	87
20.5	Computational description and datatypes	88
20.5.1	General	88
20.5.2	security_credentials_data	88
20.5.3	event_localized_security_credentials_data	88
20.5.4	security_credential_element	88

20.6	Additional provisions for bindings	89
20.7	Additional provisions for conformity	89
21	Module 21: Data structure for entity-person-group (EPG) relationships and grouping data	89
21.1	Introduction to module	89
21.2	Scope of module	89
21.3	Functional capabilities	89
21.4	Conceptual model and object model	89
21.4.1	General	89
21.4.2	epg_relationship_data	90
21.4.3	relationship_node_edge_element	90
21.5	Computational description and datatypes	90
21.5.1	General	90
21.5.2	epg_relationship_data	91
21.5.3	relationship_node_edge_element	91
21.6	Additional provisions for bindings	91
21.7	Additional provisions for conformity	91
	Annex A (informative) Index of definitions	92
22	Index of definitions	92
	Bibliography	95
	Figure 1: UML presentation of: reflit, reference_type, literal_type	35
	Figure 2: UML presentation of: multivalued, contextualized_value	44
	Figure 3: UML presentation of: multidata, contextualized_data	45
	Figure 4: UML presentation of: multistring, contextualized_string	50
	Figure 5: UML presentation of: multitext, contextualized_text	52
	Figure 6: UML presentation of slot_tuple datatype	57
	Figure 7: UML presentation of slot_tuple_as_ttt datatype	57
	Figure 8: UML presentation of slot_tuple_as_ttrl datatype	58
	Figure 9: UML presentation of slot_tuple_as_ttmd datatype	58
	Figure 10: UML presentation of slot_tuple_as_bbb datatype	58
	Figure 11: UML presentation of slot_tuple_as_btb datatype	58
	Figure 12: UML presentation of slot_tuple_as_btmd datatype	59
	Figure 13: UML presentation of slot_tuple_table datatype	61
	Figure 14: UML presentation of Reified Relationship Systems	63
	Figure 15: UML presentation of Postal Address Structure	65
	Figure 16: Postal Address Structure [diagram from UPU S42]	66
	Figure 17: Perspective of segments, constructs, and postal address elements	66
	Figure 18: UML presentation of the classes: unrendered postal address, postal address segment, postal address construct, address element	67

Figure 19: Postal Address -- All Components [diagram from UPU S42]	68
Figure 20: UML presentation of Phone Number Structure	76
Figure 21: UML presentation of Who-What-Where-When-Why-How (W5H) Event Structure	79
Figure 22: UML presentation of Who-What-Where-When-Why-How (W5H) Event Structure	84
Figure 23: UML presentation of Security Credentials Data	87
Figure 24: UML presentation of EPG Relationship Data Class	90