



LIBRARY AND INFORMATION SCIENCE TEXT SERIES

THE ORGANIZATION OF INFORMATION

SECOND EDITION



Arlene G. Taylor

CONTENTS

List of Figures	xvii
Preface	xxi
Acknowledgments	xxv

1 Organization of Recorded Information	1
The Need to Organize	1
The Nature of Information	2
The Nature of the Organization of Recorded Information	3
Organization of Information in Different Environments	7
Libraries	7
Archives	9
Museums and Art Galleries	11
The Internet	13
Digital Libraries	15
Information Architecture	18
Data Administration	19
Knowledge Management	21
Conclusion	23
Notes	23
Suggested Readings	25
General	25
Organization of Information in Libraries	25
Organization of Information in Archives/Manuscripts	26
Organization of Information in Museums/Art Galleries	26
Organization of Information in the Internet	26
Organization of Information in Digital Libraries	27
Organization of Information in Information Architecture	27
Organization of Information in Data Administration	28

Organization of Information in Knowledge Management	28
--	----

2 Retrieval Tools	29
The Need for Retrieval Tools	29
The Basic Retrieval Tools, Their Formats, and Their Functions	30
Bibliographies	30
Pathfinders	33
Catalogs	33
Purposes of Catalogs	34
Forms of Catalogs	36
Arrangements Within Catalogs	38
Indexes	40
Finding Aids	43
Registers	44
Search Engines and Directories	44
Conclusion	45
Notes	46
Suggested Readings	47

3 Development of the Organization of Recorded Information in Western Civilization	49
Inventories, Bibliographies, Catalogs, and Codification	49
Antiquity	49
Middle Ages	51
European Renaissance	52
From Inventories to Finding Lists to Collocating Devices	53
Period of Codification	55
Twentieth Century	57
Description	57
Subject Access	59
Verbal Subject Access	59
Classification	60
Special Materials	61
Archives	61
Museums and Art Galleries	62
Subject Access to Special Materials	62

Mechanization of Bibliography	62
The Documentation Movement	63
Library Automation	65
Conclusion	65
Notes	66
Suggested Readings	67

4 Encoding Standards	69
Encoding of Characters	70
Encoding of Records (Syntax)	70
Currently Used Examples of Standards for Encoding	
Records	71
MARC (MACHINE-Readable Cataloging)	72
MARC 21	76
UNIMARC	78
SGML (Standard Generalized Markup Language)	78
XML (eXtensible Markup Language)	79
DTDs (Document Type Definitions) and XML	
Schemas	80
Frameworks	90
Warwick Framework	90
RDF (Resource Description Framework)	93
METS (Metadata Encoding & Transmission Standard)	95
Semantic Web	96
Conclusion	97
Notes	97
Suggested Readings	100

5 Systems and System Design	103
Systems	103
Databases	104
Bibliographic Networks	106
Integrated Library Systems (ILSs)	108
Development of Online Public Access Catalogs	
(OPACs)	109
System Design	111
Organization of Information and System Design	112
Searching Methods	113
Retrieval Models	114

Standardization and Systems	115
Display	116
Basic Search Queries	119
Initial Articles	121
Truncation, Boolean Operators, and Proximity . . .	121
Punctuation	122
Meta-Searching and Z39.50	123
User-Centered System Design	125
Universal Design	126
Multiple Languages/Scripts	126
Other Aids for Users	127
Authority Control Integration	129
Conclusion	131
Notes	132
Suggested Readings	135

6 Metadata	139
The Basics of Metadata	141
Metadata Schemas	142
Metadata Characteristics	143
Metadata and Cataloging	144
Objectives of an Information System	146
Types of Metadata	147
Administrative Metadata	147
Preservation Metadata	148
Rights and Access Metadata	149
Meta-Metadata	150
Structural Metadata	150
Implementations of Structural Metadata	151
Descriptive Metadata	152
Management Tools	152
Application Profiles	152
Metadata Registries	153
Crosswalks	154
Harvesting Tools and Templates	155
Conclusion	155
Notes	156
Suggested Readings	158
7 Metadata: Description	159
Units to Be Described	160

Finite vs. Continuing Resources	161
<i>FRBR's</i> Entities	162
Creation of Surrogate Records	163
Bibliographic and General Metadata Schemas	165
<i>ISBD (International Standard Bibliographic Description)</i>	165
<i>Anglo-American Cataloguing Rules, Second Edition, 2002 Revision (AACR2R)</i>	168
The Dublin Core (DC)	171
MODS (Metadata Object Description Schema)	176
Domain-Specific Metadata Schemas	177
<i>ISAD(G) (General International Standard Archival Description)</i>	177
Archival <i>APPM (Archives, Personal Papers, and Manuscripts)</i> Records	180
EAD (Encoded Archival Description)	180
TEI (Text Encoding Initiative) Headers	181
GILS (Government [or Global] Information Locator Service) Records	182
FGDC (Federal Geographic Data Committee) <i>Content Standard for Digital Geospatial Metadata</i>	184
VRA (Visual Resources Association) Core Categories for Visual Resources	185
CIMI XML Schema for SPECTRUM	188
ONIX International	189
Other Surrogate Record Types	189
Index Records	189
On-the-Fly Records	190
Environmental Influences in Descriptive Metadata Creation	190
Conclusion	192
Notes	192
Suggested Readings	196

8 Metadata: Access and Authority Control	201
Need for Attention to Access	201
Need for Attention to Bibliographic Relationships	203
Choice of Access Points	206
Primary Access Point	207
Main Entry Controversy	208
Justification for Main Entry	209
AACR2 Principles for Choosing Main Entry	214

Additional Access Points	220
Authority Control	220
Headings for Access Points	224
Principles for Choice of Personal Name	224
Principles for Form of Personal Name	226
Principles for Entry Word and Remaining Structure of Personal Name	227
Principles for Choice of Corporate Name	228
Principles for Entry Word and Form of Heading for Corporate Names	229
Principles for Choice of Uniform Title	230
Principles for Arrangement of Uniform Titles	230
International Authority Control	231
Conclusion	233
Notes	235
Suggested Readings	238

9 Subject Analysis	241
Purpose of Subject Analysis	242
Challenges in Conceptual Analysis	242
Cultural Differences	244
Differences in Methods Used	244
Consistency	245
Nontextual Information	246
Subject Analysis Process	247
Exhaustivity	250
Identification of Concepts	252
Topics Used as Subject Concepts	252
Names Used as Subject Concepts	252
Chronological Elements as Subject Concepts	253
The Concept of Form as Subject	254
Translating Concepts into Index Terms	255
Translating Concepts into Classification Notations	256
Conclusion	256
Notes	256
Suggested Readings	258

10 Systems for Vocabulary Control	261
Controlled Vocabulary Challenges	262
Specific vs. General Terms	262

Synonymous Concepts	262
Word Form for One-Word Terms	263
Sequence and Form for Multiword Terms and Phrases	263
Homographs and Homophones	264
Qualification of Terms	265
Abbreviations and Acronyms	265
Popular vs. Technical Terms	265
Subdivision of Terms	266
Precoordination vs. Postcoordination	266
General Principles for Creating Controlled Vocabularies	267
Specificity	267
Literary Warrant	268
Direct Entry	268
General Principles for Applying Controlled Vocabulary Terms	268
Specific Entry	268
Number of Terms Assigned	269
Concept Not in Controlled Vocabulary	269
Index Terms for Names	270
Controlled Vocabularies	270
Mechanics of Controlled Vocabularies	271
Subject Heading Lists	274
<i>Library of Congress Subject Headings (LCSH)</i>	274
<i>Sears List of Subject Headings (Sears)</i>	275
<i>Medical Subject Headings (MeSH)</i>	275
Thesauri	277
<i>Art & Architecture Thesaurus (AAT)</i>	278
<i>Thesaurus of ERIC Descriptors</i>	278
<i>INSPEC Thesaurus</i>	281
Ontologies	282
Natural Language Processing (NLP)	284
Keywords	286
<i>WordNet</i> [®]	287
Conclusion	288
Notes	290
Suggested Readings	292
<i>LCSH</i>	293
<i>Sears</i>	294
<i>MeSH</i>	294
<i>AAT</i>	294

ERIC	294
Ontologies	295
NLP	295

11 Systems for Categorization	297
Theory of Categorization	297
Classical Theory of Categories	298
Prototype Theory	300
Bibliographic Classification	301
Hierarchical, Enumerative, and Faceted Classifications	302
Major Bibliographic Classification Schemes	305
Classification Concepts	307
Broad vs. Close Classification	307
Classification of Knowledge vs. Classification of a Particular Collection	308
Integrity of Numbers vs. Keeping Pace With Knowledge	309
Fixed vs. Relative Location	311
Closed vs. Open Stacks	311
Location Device vs. Collocation Device	312
Classification of Serials vs. Alphabetic Order of Serials . .	313
Classification of Monographic Series (Classified Separately vs. Classified as a Set)	314
Taxonomies	315
Classification on the Internet	316
Artificial Neural Networks (ANNs)	320
Conclusion	322
Notes	322
Suggested Readings	324
Classification in General	324
Specific Classification Schemes	326
Dewey Decimal Classification	326
Universal Decimal Classification	326
LC Classification	327
Colon Classification	327
Other Classification Schemes	327
Taxonomies	328
Classification and the Internet	328
Artificial Neural Networks (ANNs)	329

12 Arrangement and Display	331
Arrangement of Physical Information Packages	331
Libraries	331
Archives	333
Arrangement of Intangible Information Packages	334
Arrangement of Surrogates (Metadata)	335
Filing History	336
General Rules for Arrangement	337
Filing/Display Dilemmas	338
Conclusion	341
Notes	341
Suggested Readings	342
Arrangement of Information Packages	342
Libraries	342
Archives	342
Internet	342
Arrangement of Bibliographic/Surrogate Records	343
Conclusion	345
Note	346
Appendix: Subject-Analysis Application	347
Glossary	353
Selected Bibliography	385
Index	407