

---

# Contents

<i>Acknowledgements</i>	<i>ix</i>
<i>List of figures</i>	<i>xi</i>
<i>About the authors</i>	<i>xiii</i>
<i>Preface</i>	<i>xv</i>
<b>1 Introduction</b>	<b>1</b>
Skills and opportunities	2
The challenge	5
<b>2 Enabling technologies</b>	<b>7</b>
Network operating systems	10
Web and proxy servers	12
HTML and web design	14
Dynamic web pages	16
Relational database management systems	20
XML, web services, the Semantic Web and 'mashing'	22
Software and enabling technology	23
Technology trends	25
Summary	27
Note	28
<b>3 The role of standards in digital library integration</b>	<b>29</b>
Important library automation standards	30
MARC	31
Technical challenges when working with MARC	33
XML	34
Standards facilitating data discovery and transmission	39
Z39.50	40
SRU/W: next generation of Z39.50	41
OpenSearch	44
Open archives initiative	44
OpenURL	45
Digital object identifiers	46
Authentication standards	47
Lightweight directory access protocol	47
Shibboleth	48
Standards facilitating particular processes	48

	Emerging standards	49
	Summary	51
	Note	52
<b>4</b>	<b>Authentication, identity management and security</b>	<b>53</b>
	Integrated library system approaches	55
	LDAP Solutions	56
	Shibboleth	58
	Athens	59
	Integrated identity management challenges	59
	Data, network and server security	60
	How systems are compromised	63
	Tools to prevent security breaches	64
	Basic systems and network protection	67
	If systems are compromised	68
	Conclusions	69
	Summary	69
	Notes	70
<b>5</b>	<b>Interfacing with integrated library systems</b>	<b>73</b>
	The role of the ILS in the digital library	73
	Digital library products offered by ILS vendors	76
	Access to ILS data	78
	Manipulating the data in an ILS	82
	Connecting the ILS to other systems	84
	Repurposing ILS data	86
	ILS case study at Lewis & Clark College	87
	The future role of the ILS	90
	Summary	93
	Notes	94
<b>6</b>	<b>Electronic resource management</b>	<b>95</b>
	Emergence of electronic resources management	95
	ERM tasks	97
	ERM functional overview	99
	Coverage data	101
	Resource administration and management	103
	Managing selection and acquisition	104
	The electronic resources management initiative	105
	ERMS types	105
	Willamette case study	109
	Final ERM considerations	110
	Summary	111
<b>7</b>	<b>Digital asset management</b>	<b>113</b>
	The digital asset management challenge	113

Crossing boundaries	115
DAM overview	116
Collection-centered DAM	119
Beyond the collection	120
DAM system basics	121
DAM solutions for different media	122
Comprehensive models: Fedora	126
Metadata	128
Integration with digital libraries	129
The strategic role of DAM	131
Summary	133
Notes	133
<b>8 Integration with content providers</b>	<b>135</b>
OpenURL	136
OpenURL resolvers	139
Digital object identifiers	142
Federated searching	143
Expanding role of search engines	145
Locally developed integration	149
Summary	151
Notes	152
<b>9 Library portals</b>	<b>153</b>
What is a library portal?	153
The simple portal	154
The well-integrated portal	156
The well-rounded portal	160
Final considerations	164
Summary	164
<b>10 Conclusion: digital libraries and the library organisation</b>	<b>167</b>
Digital library development and the library organisation	167
Public services	169
Collection management and special collections	170
Cross-functional teams	171
Skills for digital library personnel	172
Strategic planning	176
The future of digital library integration	178
Summary	182
Notes	184
<b>Glossary: acronyms used in this book</b>	<b>185</b>
<b>Bibliography</b>	<b>189</b>
<b>Index</b>	<b>197</b>