Contents

Foreword *Clifford Lynch* ..... **ix**
Acknowledgements ..... **xiii**
Note to readers ..... **xv**
Glossary ..... **xvii**

1 What is access management, and why do libraries do it? **1**
Historical role of libraries in managing access to information 1
The role of libraries in the 21st century 2
The history of access management of online information resources 4
The role of e-commerce in library access management 5
The 'birth' of access management principles – Clifford Lynch's white paper 6
References 7

2 Electronic resources: public and not so public **9**
Managing access to electronic collections 9
How and where users may want to access e-resources 10
What needs to be protected, and why 11
Commercially produced resources that need to be protected 12
Publicly available information that may also require access management 14
Publishers and licensing issues 15
Library management of licences 17
Summary 19
References 19

3 Principles and definitions of identity and access management.....21
Introduction 21
Managing access? . . . or identities? . . . or both? 22
The business relationships 23
The processes of identity and access management 24
Identifying the person using a resource – or not 27
Obligations to protect personal data about users 28
Summary 28
References 29

4 Current access management technologies 31
IP address 31
Barcode patterns 33
Proxy servers 33
Shared passwords 34
User registration with publishers 35
Federated access 36
Summary 37

5 Authentication technologies 39
'Something you know, something you have, or something you are' 39
Authentication technologies overview 40
Authentication by third parties 49
Choosing an authentication system 50
Summary 51
References 52

6 Authorization based on physical location: how does the internet know where I am? 55
Introduction 55
Domains and domain names 55
(How) is all this governed? 56
IP addresses 58
IP spoofing 65
Benefits and problems of using IP address-based licensing 66
Summary 66
References 66

7 Authorization based on user identity or affiliation with a library: who you are? Or what you do? 69
Basing access on identity, or on affiliation with a library 69
Role-based authorization 71
Matching roles against licence conditions 75
Benefits of role-based authorization 76

Summary 79
References 79

8 Federated access: history, current position and future developments 81
Single sign-on and the origins of federated access management 81
The development of standards 83
Federated access in academia 85
The future of federated access 93
Summary 94
References 95

9 How to choose access management and identity management products and services 99
Introduction 99
Identity management and access management solution capabilities 101
Establishing requirements with suppliers 102
Asserting library requirements in a wider-scale system procurement 106
Implementation options 108
The range of access and identity management products 110
Conclusions 110
References 111

10 Internet access provided by (or in) libraries 113
Introduction 113
Wired access 117
Wireless access 118
Public access issues 121
Summary 125
References 125

11 Library statistics 127
Why libraries collect electronic resource usage statistics 127
Challenges in collecting electronic resource usage data 128
How libraries collect usage data 130
Concluding thoughts 134
References and further reading 135

12 The business case for libraries 139
Introduction 139
Key benefits of quality identity management 143
Designing an IdM project 145
Putting together a business case 150

Conclusions 153
References and further reading 154

Afterword 155
References 157

Appendix 1: Case studies 159
Extending access management to business and community engagement activities at Kidderminster College, UK 160
Moving from Athens to Shibboleth at University College London, UK 163
Online reciprocal borrowing registration for Western Australian University Libraries 167
Library and IT collaboration: driving strategic improvements to identity and access management practices and capabilities 172
Managing affiliated users with federated identity management at UNC-Chapel Hill, USA 182
Tilburg University and the SURFfederatie, the Netherlands 186
Delivering access to resources in a joint academic and public library building, UK 190
Single sign-on across the USMAI Consortium, USA 194

Appendix 2: A White Paper on Authentication and Access Management Issues in Cross-organizational Use of Networked Information Resources *Clifford Lynch, editor* **..... 201**

Index 237