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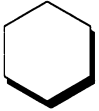
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# Global Information Systems

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**This book is dedicated to the lost souls of Dunblane.**

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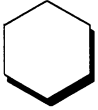
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# Contents

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<i>Preface</i>	<i>xi</i>
<b>1 Information Sources and Multimedia</b>	<b>1</b>
1.1 Introduction	1
1.2 Information sources	1
1.3 Multimedia	2
1.4 Standard and typical file formats	2
1.5 Operating systems and user interfaces	7
1.6 File compression	8
1.7 Transmission rates and times	8
1.8 Communication connections	9
1.9 ASCII character codes	11
1.10 Exercises	14
1.11 Tutorial	18
<b>2 Digital Information</b>	<b>21</b>
2.1 Introduction	21
2.2 Digital versus analogue	22
2.3 Conversion to digital	23
2.4 Sampling theory	24
2.5 Quantization	25
2.6 Exercises	26
2.7 Tutorial	28
<b>3 Digital Storage</b>	<b>31</b>
3.1 Introduction	31
3.2 Optical storage	31
3.3 Magnetic tape	33
3.4 Magnetic disk	35
3.5 Disk interfaces	38
3.6 Drive specifications	39
3.7 Electronic storage	39
3.8 Memory addressing size	40
3.9 Memory connections	40
3.10 ROM	41
3.11 Static RAM (SRAM) memory	42
3.12 Dynamic RAM (DRAM) memory	43

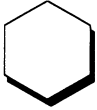
3.13	Exercises	44
<b>4</b>	<b>The World Wide Web</b>	<b>49</b>
4.1	Introduction	49
4.2	Web browsers	50
4.3	URLs	52
4.4	HTML	53
4.5	Background images	61
4.6	Displaying images	62
4.7	Java	69
4.8	Other links	70
4.9	Exercise	71
4.10	Tutorial	73
<b>5</b>	<b>Data Compression</b>	<b>77</b>
5.1	Introduction	77
5.2	Compression methods	77
5.3	Coding methods	77
5.4	Repetitive sequence suppression	78
5.5	Statistical encoding	79
5.6	Differential encoding	80
5.7	Transform encoding	82
5.8	Typical compression techniques for audio and video	82
5.9	Exercises	83
<b>6</b>	<b>Data Communications Models, Networks and Standards</b>	<b>85</b>
6.1	Introduction	85
6.2	LANs, WANs, and MANs	85
6.3	Local area networks (LANs)	87
6.4	OSI model	92
6.5	Communications standards and the OSI model	94
6.6	Standards agencies	95
6.7	Network cable types	96
6.8	Exercises	98
6.9	Tutorial	99
<b>7</b>	<b>LAN Topology</b>	<b>101</b>
7.1	Introduction	101
7.2	Network topologies	102
7.3	Repeaters	105
7.4	Network loading	105
7.5	Exercises	106

<b>8</b>	<b>LAN: Ethernet</b>	<b>107</b>
	8.1 Introduction	107
	8.2 IEEE standards	109
	8.3 Logical link control	109
	8.4 Ethernet – media access control (MAC) layer	110
	8.5 Ethernet transceivers	111
	8.6 Standard Ethernet limitations	112
	8.7 Ethernet types	114
	8.8 Twisted-pair hubs	115
	8.9 100Mbps Ethernet	117
	8.10 Exercises	119
	8.11 Tutorial	121
<b>9</b>	<b>LAN: Token Ring</b>	<b>123</b>
	9.1 Introduction	123
	9.2 Operation	123
	9.3 Token ring – media access control (MAC)	124
	9.4 Token ring maintenance	127
	9.5 Token ring multi-station access units (MAU)	128
	9.6 Cabling and connectors	129
	9.7 Repeaters	130
	9.8 Exercises	131
	9.9 Tutorial	132
<b>10</b>	<b>LAN/WAN: FDDI</b>	<b>133</b>
	10.1 Introduction	133
	10.2 Operation	133
	10.3 FDDI layers	135
	10.4 SMT protocol	137
	10.5 Fault tolerance method	137
	10.6 FDDI token format	137
	10.7 FDDI frame format	138
	10.8 Applications of FDDI networks	139
	10.9 FDDI backbone network	140
	10.10 FDDI attachments	141
	10.11 Practical FDDI network – EaStMAN	142
	10.12 Exercises	144
	10.13 Tutorial	144
<b>11</b>	<b>MAN: Asynchronous Transfer Mode (ATM)</b>	<b>147</b>
	11.1 Introduction	147
	11.2 Real-time sampling	148
	11.3 PCM-TDM systems and ISDN	149

11.4	Objectives of ATM	150
11.5	ATM versus ISDN and PCM-TDM	151
11.6	Statistical multiplexing	152
11.7	ATM user network interfaces (UNI)	152
11.8	ATM cells	153
11.9	Routing cell within an ATM network	153
11.10	ATM and the OSI model	154
11.11	ATM physical layer	155
11.12	ATM flow control	156
11.13	Practical ATM networks	156
11.14	Tutorial	158
<b>12</b>	<b>Integrated Services Digital Network (ISDN)</b>	<b>159</b>
12.1	Introduction	159
12.2	ISDN channels	160
12.3	ISDN physical layer interfacing	161
12.4	ISDN data link layer	164
12.5	ISDN network layer	169
12.6	Exercises	171
12.7	Tutorial	172
<b>13</b>	<b>Video Conferencing</b>	<b>173</b>
13.1	Introduction	173
13.2	Baseband video signals	176
13.3	Quadrature modulation	180
13.4	Digitizing composite video signals	183
13.5	MPEG compression	185
13.6	MPEG-2 compression	190
13.7	Exercises	192
13.8	Tutorial	193
<b>14</b>	<b>Modems</b>	<b>195</b>
14.1	Introduction	195
14.2	RS-232 communications	196
14.3	Modem standards	198
14.4	Modem commands	198
14.5	Modem set-ups	201
14.6	Modem indicators	203
14.7	Digital modulation	204
14.8	Typical modems	206
14.9	Fax transmission	208
14.10	Exercises	209
14.11	Tutorial	211



<b>15</b>	<b>TCP/IP</b>	<b>213</b>
	15.1 Introduction	213
	15.2 TCP/IP gateways and hosts	214
	15.3 Functions of the IP protocol	215
	15.4 Internet datagram	215
	15.5 TCP/IP internets	217
	15.6 Domain name system	221
	15.7 Internet naming structure	221
	15.8 Domain name server	222
	15.9 Novell Netware networking	222
	15.10 Exercises	223
	15.11 Tutorial	224
<b>A</b>	<b>Information Sources</b>	<b>225</b>
	A.1 Searching for files	225
	A.2 Application programs	226
	A.3 Tutorial	228
<b>B</b>	<b>ASCII Coding and RS-232C</b>	<b>229</b>
	B.1 International alphabet No. 5	229
	B.2 RS-232C interface	231
<b>C</b>	<b>SIMM Modules</b>	<b>233</b>
	C.1 30-pin SIMM	233
	C.2 72-pin SIMM	233
<b>D</b>	<b>RLE Program</b>	<b>235</b>
	D.1 RLE program	235
<b>E</b>	<b>Cable Specifications</b>	<b>239</b>
	E.1 Introduction	239
<b>F</b>	<b>Additional WWW</b>	<b>245</b>
	F.1 Client/server architecture	245
	F.2 Universal resource locators (URLs)	246
	F.3 Intranets	248
	F.4 Firewalls	249
<b>G</b>	<b>Common Abbreviations</b>	<b>253</b>
	<i>Index</i>	257



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# Preface

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Data communications is an area which grows each year as demand and computing power increases. More and more information is becoming digitized at its source and then either stored or transmitted in a digital form. Unfortunately, there are many different types of data transmission techniques and networks types, but luckily, for users, there are now international standard which most hardware and software manufacturers abide by. These standards include:

- Ethernet;
- Token ring;
- FDDI;
- Modems;
- RS-232;
- ATM;
- ISDN;
- Video conferencing;
- TCP/IP;
- Compression techniques (JPEG, MPEG, ZIP, and so on).

The objective of this book is to give an insight on the workings of these systems. It splits into three main parts:

- Digital information, conversion, storage and compression (chapters 1–5);
- Local area and wide area networks (chapters 6–11);
- Connections to networks (chapters 12–15).

Typical local area network technologies, such as Ethernet, IBM token ring and FDDI are discussed in depth using the ISO 7-layered model.

One of the great increases in digital information transmission will be in the transmission of real-time data, either in images or sound. This type of data requires a different type of network. These are likely to use new technologies such as Fast Ethernet, ATM and ISDN.

The appendices are used to provide a basic source of reference material. Further information on related subjects, such as emerging technologies and the diagrams from the text are available on the WWW page:

[http://www.eece.napier.ac.uk/~bill\\_b/gbook.html](http://www.eece.napier.ac.uk/~bill_b/gbook.html)

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