

CONTENTS

<i>List of Figures</i>	xvii
<i>List of Tables</i>	xxi
<i>Preface and Acknowledgments</i> <i>Deena Engel and Joanna Phillips</i>	xxiii

PART I

Caring for Time-Based Media Art	1
1 Implementing Time-Based Media Art Conservation in Museum Practice <i>Joanna Phillips</i>	3
1.1 <i>Where to Begin</i>	4
1.2 <i>The Consequences and Costs of Inaction</i>	5
1.3 <i>It Takes a Village: Organizing In-House</i>	6
1.4 <i>Finding the Workforce</i>	7
1.5 <i>Creating a Workplace</i>	11
1.6 <i>Engaging in Networks of Practice Development</i>	11
1.7 <i>Conclusion</i>	12
2 Theories of Time-Based Media Art Conservation: From Ontologies to Ecologies <i>Renée van de Väll</i>	13
2.1 <i>Introduction</i>	13
2.2 <i>Ontologies</i>	14
2.2.1 <i>Integrities</i>	15
2.2.2 <i>Work-Defining Properties</i>	15
2.2.3 <i>Between Instructions and Manifestations</i>	17
2.2.4 <i>Differential Approaches to Conservation</i>	19
2.2.5 <i>Medium-Independent Behaviors</i>	21

2.3	<i>Ecologies</i>	23	
2.3.1	<i>Institutions and Networks</i>	23	
2.3.2	<i>Doing Installation Art</i>	24	
2.3.3	<i>Biographies</i>	24	
2.3.4	<i>Producing Permanence</i>	25	
2.4	<i>Conclusion</i>	26	
3	A Roundtable: Curatorial Perspectives on Collecting Time-Based Media Art		28
	<i>Annet Dekker in conversation with Karen Archey, Ulanda Blair, Sarah Cook, Ana Gonçalves Magalhães, Sabine Himmelsbach, Kelani Nichole, Christiane Paul, and Henna Paunu</i>		
3.1	<i>Moving from Technical Risk to the Importance of Curatorial Knowledge</i>	29	
3.2	<i>The Role of the Curator in Preservation Matters</i>	32	
3.3	<i>Collaboration Beyond the Institution</i>	35	
4	Institutional Assessments and Collection Surveys for Time-Based Media Conservation		39
	<i>Lia Kramer, Alexandra Nichols, Mollie Anderson, Nora Kennedy, Lorena Ramírez López, and Glenn Wharton</i>		
4.1	<i>Introduction to TBM Conservation Assessments and Surveys</i>	39	
4.2	<i>Foundational Methodologies for Conservation Assessments and Surveys for Cultural Heritage Collections</i>	40	
4.2.1	<i>Conservation Assessments</i>	40	
4.2.2	<i>Collection Surveys</i>	42	
4.3	<i>Frameworks for TBM Conservation Institutional Assessments and Collection Surveys</i>	43	
4.3.1	<i>TBM Conservation Institutional Assessments</i>	43	
4.3.2	<i>TBM Conservation Collection Surveys</i>	44	
4.3.3	<i>Organizing the Institutional Assessment or Collection Survey</i>	45	
4.4	<i>Conducting a TBM Institutional Assessment</i>	48	
4.4.1	<i>Phase 1: Information-Gathering Prior to the Assessment</i>	48	
4.4.2	<i>Phase 2: Interviews with Key Staff Members</i>	48	
4.4.3	<i>Phase 3: Examination of Museum Spaces, Storage, and Infrastructure</i>	49	
4.4.4	<i>Phase 4: Crafting the Final Institutional Assessment Report</i>	49	
4.4.5	<i>Phase 5: Follow-up Visit</i>	52	
4.5	<i>Conducting a TBM Collection Survey</i>	53	
4.5.1	<i>Format Inventory and Identification of Migration Needs</i>	54	

4.5.2	<i>Storage and Housing Survey</i>	55
4.5.3	<i>Documentation Survey</i>	56
4.5.4	<i>Equipment Inventory</i>	56
4.5.5	<i>Registration and Cataloging</i>	56
4.5.6	<i>Digital Storage</i>	57
4.5.7	<i>Condition Assessment</i>	57
4.5.8	<i>Treatment Prioritization</i>	58
4.5.9	<i>Crafting the Final Collections Survey Report</i>	58
4.6	<i>Next Steps</i>	61
4.7	<i>Conclusion</i>	62
<i>Appendix 4.1: Artwork Summary Template Used by the Authors for the 2017–18 Met TBM Collection Survey</i>		65
5	<i>Outside the Institution: Crossing the Boundaries of Communities and Disciplines to Preserve Time-Based Media</i>	67
<i>Mona Jimenez, Kristin MacDonough, and Martha Singer</i>		
5.1	<i>Introduction</i>	68
5.2	<i>Community Archiving Workshop (CAW)</i>	70
5.2.1	<i>Partnerships and Museum Relationships</i>	71
5.2.2	<i>Workflows</i>	73
5.2.3	<i>Impact on Communities and Collections</i>	73
5.3	<i>Audiovisual Preservation Exchange (APEX)</i>	74
5.3.1	<i>Archives and Artist Improvisations</i>	77
5.3.2	<i>Partnerships and Exchange</i>	78
5.3.3	<i>Principles of Collaboration</i>	79
5.4	<i>XFR Collective</i>	80
5.4.1	<i>Origins and Motivations</i>	83
5.4.2	<i>Projects</i>	84
5.4.3	<i>Impact on Communities and Collections</i>	84
5.5	<i>Conclusion</i>	85
6	<i>The Role of Advocacy in Media Conservation</i>	89
<i>Jim Coddington</i>		
6.1	<i>Introduction</i>	89
6.2	<i>Why Is It a Problem?</i>	90
6.3	<i>What Is the Problem?</i>	90
6.4	<i>You Have a Problem—So What?</i>	90
6.5	<i>Make the Problem a Joint Priority</i>	90
6.6	<i>Turn the Problem into a Project</i>	91
6.7	<i>Articulate the Project</i>	92
6.8	<i>Summary</i>	92

PART II		
Building a Workplace		93
7	Building a Time-Based Media Conservation Lab: A Survey and Practical Guide, from Minimum Requirements to Dream Lab <i>Kate Lewis</i>	95
7.1	<i>Introduction: TBM Lab Fundamentals</i>	96
7.2	<i>Space and Requirements</i>	97
7.3	<i>Purpose-Built Labs</i>	100
7.4	<i>Medium-Specific Overview</i>	102
	7.4.1 <i>Digital Workstation</i>	102
	7.4.2 <i>Tape-Based Media Workstation</i>	103
	7.4.3 <i>Film and Slide Tools</i>	104
	7.4.4 <i>Display Equipment and General Tools</i>	104
7.5	<i>Priorities and Advocacy</i>	104
7.6	<i>Sustaining a TBM Lab</i>	106
	<i>Appendix 7.1 Lab Equipment Lists Compiled by Kate Lewis</i>	108
8	Digital Storage for Artworks: Theory and Practice <i>Amy Brost</i>	111
8.1	<i>Introduction</i>	111
8.2	<i>What Is a Repository?</i>	112
8.3	<i>Repository Models</i>	114
8.4	<i>Unique Needs of Artworks</i>	118
8.5	<i>Minimum Requirements</i>	120
8.6	<i>Deploying the Digital Repository</i>	126
8.7	<i>Automation</i>	128
8.8	<i>Conclusion</i>	131
9	Staffing and Training in Time-Based Media Conservation <i>Louise Lawson</i>	139
9.1	<i>Context</i>	139
9.2	<i>Staffing Models and the Conservator</i>	140
9.3	<i>What Skills and Knowledge?</i>	142
9.4	<i>Who Has Responsibility?</i>	144
9.5	<i>How? Education and Training</i>	145
	9.5.1 <i>Entry-Level Opportunities</i>	150
	9.5.2 <i>Continual Professional Development</i>	150
9.6	<i>The Future</i>	151

10	A Roundtable: Implementing Cross-Departmental Workflows at SFMOMA	154
	<i>Martina Haidvogl in conversation with Michelle Barger, Joshua Churchill, Steve Dye, Rudolf Frieling, Mark Hellar, Jill Sterrett, Grace T. Weiss, Layna White, and Tanya Zimbardo</i>	
10.1	<i>Introduction</i>	154
10.2	<i>In Response to a Need</i>	156
10.3	<i>The Value of Collaboration</i>	158
10.4	<i>A Certain Level of Discomfort</i>	159
10.5	<i>Honoring a Collective Expertise</i>	160
10.6	<i>The Role of the Media Conservator</i>	161
10.7	<i>Looking Ahead</i>	161
PART III		
	Cross-Medium Practices in Time-Based Media Conservation	163
11	Documentation as an Acquisition and Collection Tool for Time-Based Media Artworks	165
	<i>Patricia Falcão, Ana Ribeiro, and Francesca Colussi</i>	
11.1	<i>Introduction</i>	165
11.1.1	<i>The Role of Documentation in Conservation</i>	166
11.1.2	<i>Evolution of Documentation Practices in Time-Based Media Conservation</i>	166
11.1.3	<i>Emerging Practice</i>	167
11.2	<i>Time-Based Media Documentation Stages</i>	168
11.2.1	<i>Pre-acquisition</i>	169
11.2.2	<i>Acquisition</i>	169
11.2.3	<i>Exhibition</i>	174
11.2.4	<i>Loans</i>	177
11.2.5	<i>Conservation Interventions</i>	177
11.2.6	<i>High-Level Documentation: Policies, Strategies, Guidelines, and Workflows</i>	178
11.2.7	<i>Integrated Approach to Documentation</i>	178
11.3	<i>Conclusion</i>	181
12	Inventory and Database Registration of Time-Based Media Art	185
	<i>Martina Haidvogl and Linda Leckart</i>	
12.1	<i>The Collection Information Environment</i>	185
12.1.1	<i>Digital Spreadsheets</i>	186
12.1.2	<i>Desktop Databases</i>	186
12.1.3	<i>Collection Management Systems</i>	186

12.2	<i>Cataloging Time-Based Media Art</i>	186
12.2.1	<i>Track Every Component</i>	187
12.2.2	<i>Reflect the Status of Components</i>	187
12.2.3	<i>Note Locations, Also Digital Ones</i>	188
12.2.4	<i>Note Relationships Between Components</i>	188
12.3	<i>Inventory</i>	188
12.3.1	<i>Defining the Categories</i>	188
12.3.2	<i>Selecting the Documentation System</i>	189
12.3.3	<i>Enriching the Record</i>	189
12.3.4	<i>Updating the Record</i>	189
12.4	<i>Time-Based Media Numbering Within a Collection Management System</i>	190
12.4.1	<i>Keep It Flexible</i>	190
12.4.2	<i>Integrate with the Existing System</i>	190
12.4.3	<i>Create a Comprehensive Numbering System</i>	192
12.5	<i>Beyond the Database: Where to Store What Doesn't Fit?</i>	193
12.6	<i>Conclusions</i>	194
13	<i>Digital Preservation and the Information Package</i>	196
	<i>Nicole Martin</i>	
13.1	<i>Introduction: Preservation and the Past, Present, and Future</i>	196
13.2	<i>Defining the Information Package: The OAIS Reference Model and BagIt</i>	197
13.3	<i>Benefits of Information Packages</i>	198
13.4	<i>Data Ingest and Acquisition</i>	199
13.4.1	<i>Acquisition</i>	199
13.4.2	<i>File Transfer</i>	199
13.5	<i>OAIS Information Packages</i>	200
13.5.1	<i>The Submission Information Package</i>	200
13.5.2	<i>The Archival Information Package</i>	201
13.6	<i>Conclusion</i>	203
14	<i>Disk Imaging as a Backup Tool for Digital Objects</i>	204
	<i>Eddy Colloton, Jonathan Farbowitz, and Caroline Gil Rodríguez</i>	
14.1	<i>Disk Imaging in Media Conservation</i>	204
14.2	<i>Use Cases for Disk Images</i>	205
14.2.1	<i>Disk Image as an Archival Copy</i>	205
14.2.2	<i>Disk Image as a Tool for Artwork Examination</i>	206
14.2.3	<i>Disk Image as a Backup for Exhibition</i>	206
14.2.4	<i>Disk Image as a Deliverable for Loans</i>	206
14.3	<i>What to Disk-Image</i>	207
14.4	<i>Necessary Hardware, Software, and Tools for Disk Imaging</i>	207

14.4.1	<i>Preventing Damage to Hardware or Data</i>	209
14.4.2	<i>Disk Imaging Workstation</i>	210
14.4.3	<i>Software Choices for Creating Images</i>	211
14.5	<i>Disk Imaging Formats and Selection Criteria</i>	213
14.5.1	<i>Sustainability</i>	213
14.5.2	<i>Compression</i>	214
14.5.3	<i>Metadata</i>	214
14.6	<i>Review of Formats</i>	215
14.7	<i>Disk Image Metadata</i>	215
14.8	<i>Sample Disk Imaging Workflow</i>	218
14.9	<i>The Evolving Practice of Disk Imaging</i>	219
15	<i>Managing and Storing Artwork Equipment in Time-Based Media Art</i>	223
	<i>Duncan Harvey</i>	
15.1	<i>Introduction</i>	223
15.2	<i>Change and Assessing Significance</i>	224
15.3	<i>Levels of Significance</i>	225
15.4	<i>Documentation</i>	228
15.5	<i>Sources of Equipment</i>	230
15.6	<i>Storage</i>	232
15.7	<i>Technical Care</i>	233
15.7.1	<i>Who Undertakes Technical Care?</i>	233
15.7.2	<i>Loan</i>	236
15.7.3	<i>Strategies for Technical Care</i>	237
15.7.4	<i>End of Life</i>	237
15.8	<i>Conclusion</i>	237
16	<i>The Installation of Time-Based Media Artworks</i>	239
	<i>Tom Cullen</i>	
16.1	<i>Introduction</i>	239
16.2	<i>Defining Artworks by Spatial, Aesthetical, and Technical Requirements</i>	240
16.3	<i>Understanding the Space Requirements of the Artwork and the Requirements of the Exhibition Space</i>	240
16.4	<i>Determining the Aesthetics of an Artwork's Display</i>	242
16.5	<i>Integrating the Artwork in the Space</i>	243
16.6	<i>The Technical Realization of Time-Based Media Artworks</i>	244
16.7	<i>Creating a Technical Rider for New Works and Commissions</i>	245
17	<i>A Roundtable: Collaborating With Media Artists to Preserve Their Art</i>	249
	<i>Joanna Phillips and Deena Engel in conversation with Lauren Cornell, Mark Hellar, Diego Mellado, Steven Sacks, Lena Stringari, Siebren Versteeg, and Gaby Wijers</i>	

- 17.1 Introduction 249
- 17.2 *Is Media Art Intended to Last?* 250
- 17.3 *Transferring Ownership by Transferring Knowledge* 253
- 17.4 *Gathering Distributed Knowledge* 257
- 17.5 *The Significance of Exhibition for the Preservation of Media Artwork* 258
- 17.6 *When Artists Maintain Their Own Work* 259
- 17.7 *The Professionalization of Media Conservation* 260
- Appendix 17.1 *Bitforms Gallery Collector Agreement* 262

PART IV

Medium-Specific Practices in Time-Based Media Conservation

267

18 Caring for Analog and Digital Video Art

269

Agathe Jarczyk and Peter Oleksik

- 18.1 Introduction 269
- 18.2 *A Brief Overview of Video as a Medium in Artists' Practice* 269
- 18.3 *The Beginnings of Collecting and Preserving Video* 271
- 18.4 *Collection Practices Today* 274
 - 18.4.1 *Pre-acquisition Process: Defining Deliverables with the Artist* 274
 - 18.4.2 *Pre-acquisition Process: Identifying the Significance of Technologies* 275
 - 18.4.3 *Acquisition Process: The Evaluation of Artist-Provided Materials* 276
- 18.5 *Acquisition Process: The Condition Assessment of Video Materials* 276
 - 18.5.1 *Acquisition Process: Condition Assessment of Analog and Digital Videotapes* 277
 - 18.5.2 *Acquisition Process: Condition Assessment of Digital, File-Based Video* 278
- 18.6 *Digitization as a Preservation Strategy* 279
 - 18.6.1 *Digitization as a Key Moment in the Life of an Artwork* 280
 - 18.6.2 *Preparing for Digitization* 281
 - 18.6.3 *Choosing the Right Equipment for Digitization* 281
 - 18.6.4 *Time Base Correctors* 282
 - 18.6.5 *Determining the Target Formats for Digitization* 282
 - 18.6.6 *Maintaining the Sound Layout During Digitization* 283
 - 18.6.7 *Documentation of Digitization* 283
- 18.7 *Migrating Digital Video* 283
 - 18.7.1 *Review and Analysis* 283

- 18.7.2 *Non-invasive (Non-transcode) Metadata Adjustments* 287
- 18.7.3 *Transcoding and Compression* 288
- 18.7.4 *Digital Storage of File-Based Video* 289
- 18.7.5 *Storing Tapes, Discs, and Drives* 289
- 18.8 *A Closer Look: The Technical Makeup of Video* 290
 - 18.8.1 *Basics of the Video Signal* 290
 - 18.8.2 *Color* 290
 - 18.8.3 *Videotape* 291
 - 18.8.4 *Analog to Digital Video* 293
 - 18.8.5 *Digital Video* 293
 - 18.8.6 *Video Format Identification* 295
- 18.9 *Video Hardware* 295
 - 18.9.1 *Analog and Digital Display Technologies* 295
 - 18.9.2 *Analog and Digital Playback Technologies* 304
 - 18.9.3 *Ancillary Devices* 306
 - 18.9.4 *Analog and Digital Signal Connections* 306
 - 18.9.5 *Sound Systems* 306
- 18.10 *Preparing Video Artworks for Exhibition* 308
 - 18.10.1 *Preparing the Equipment for Exhibition* 309
 - 18.10.2 *Preparing the Audiovisual Media for Exhibition* 310
 - 18.10.3 *Exhibition Documentation* 311
- 18.11 *Conclusion* 312

19 Sound in Time-Based Media Art

317

Christopher McDonald

- 19.1 *Introduction* 317
- 19.2 *Physics—The Nature of Sound* 319
 - 19.2.1 *Sound as Space* 320
 - 19.2.2 *Pitch, Timbre, and Noise* 321
 - 19.2.3 *Complex Sound and Sonic Cancellation* 323
- 19.3 *Psychoacoustics—The Experience of Sound* 324
 - 19.3.1 *The Perception of Sound Is Relative* 326
 - 19.3.2 *Balancing Sonic Environments in an Exhibition Context* 327
- 19.4 *Recording Sound* 328
 - 19.4.1 *Analog versus Digital Recording* 331
 - 19.4.2 *Analog Audio on Magnetic Tape and Vinyl* 331
 - 19.4.3 *Sample Rate and Bit Depth in Digital Audio* 332
 - 19.4.4 *Wordclock in Analog-to-Digital and Digital-to-Analog Conversion* 332
 - 19.4.5 *Digital Audio Formats* 333
- 19.5 *Reproducing Sound* 334
 - 19.5.1 *The Importance of Sample Rates* 334

19.5.2	<i>Getting the Audio to Speakers</i>	336
19.5.3	<i>Frequency Range</i>	336
19.5.4	<i>Active and Passive Speakers—Balanced, Unbalanced, and Digital Cables</i>	337
19.5.5	<i>Choosing Speakers That Reflect the Artist's Intentions</i>	339
19.6	<i>Exhibiting Sound</i>	339
19.6.1	<i>Reducing Sound Reflections</i>	340
19.6.2	<i>Considering the Space and Location</i>	341
19.6.3	<i>Tailoring the Sound to the Space</i>	342
19.6.4	<i>Documenting the Intended Sound Experience</i>	342
19.6.5	<i>Maintaining the Work During Exhibition</i>	344
19.6.6	<i>Knowing the Artwork</i>	344
20	<i>Caring for Analog and Digital Film-Based Art</i>	347
	<i>John Klacsmann, with a contribution by Julian Antos</i>	
20.1	<i>Introduction</i>	347
20.2	<i>A Brief Overview of Film as a Medium in Artists' Practice</i>	348
20.3	<i>Collecting Artists' Film</i>	349
20.4	<i>What Is Analog Film?</i>	349
20.4.1	<i>Material Composition</i>	349
20.4.2	<i>The Basics of Film Printing and Duplication</i>	349
20.4.3	<i>Manufacturing</i>	351
20.5	<i>Analog Film Identification, Inspection, and Documentation</i>	351
20.5.1	<i>Gauge</i>	354
20.5.2	<i>Base</i>	357
20.5.3	<i>Film Wind</i>	359
20.5.4	<i>Types of Film Stocks</i>	360
20.5.5	<i>Date Codes and Edge Printing</i>	363
20.5.6	<i>Optical Soundtracks</i>	365
20.5.7	<i>Magnetic Soundtracks</i>	367
20.5.8	<i>Base Deterioration</i>	369
20.5.9	<i>Color Dye Fading</i>	371
20.5.10	<i>Film Damage/Footage/Splice Count</i>	371
20.5.11	<i>Identifying Original, Master, and Print Materials</i>	372
20.6	<i>Duplication and Digitization</i>	374
20.6.1	<i>Preliminary Steps</i>	374
20.6.2	<i>Film-to-Film Duplication/Photochemical Film Preservation</i>	375
20.6.3	<i>Film-to-Digital Duplication/Digitization</i>	382
20.6.4	<i>Hybrid Approaches: Digital Source Output to Analog Film</i>	388

20.6.5	<i>Working with Film Labs</i>	389
20.6.6	<i>Quality Control</i>	390
20.7	<i>Storage</i>	390
20.7.1	<i>Film Storage</i>	390
20.7.2	<i>Digital Storage</i>	392
20.8	<i>Exhibiting Film-Based Art</i>	392
20.8.1	<i>Screening Room Considerations and Design</i>	392
20.8.2	<i>Film Projector Types and Anatomy</i>	395
20.8.3	<i>Loopers and Gallery Display</i>	398
20.8.4	<i>Storage, Maintenance, and Long-Term Care of Film Projectors</i>	399
20.8.5	<i>Digital Cinema Projectors</i>	399
20.8.6	<i>Analog and Digital Film Loans</i>	400
20.9	<i>Conclusion</i>	401
Appendix 20.1	<i>Anthology Film Archives—Film Inspection Report</i>	402
21	<i>Caring for Slide-Based Artworks</i>	406
	<i>Jeffrey Warda</i>	
21.1	<i>Introduction</i>	406
21.2	<i>History of the Slide Projector Show</i>	409
21.3	<i>Acquisition of Slide-Based Artworks</i>	410
21.3.1	<i>Components</i>	412
21.3.2	<i>Cataloging Components</i>	415
21.4	<i>Examination and Condition Assessment</i>	419
21.5	<i>Duplicating Slides</i>	421
21.5.1	<i>Film-to-Film Slide Duplication</i>	421
21.6	<i>Digitization of Slides</i>	422
21.6.1	<i>Digitizing with Scanners</i>	427
21.6.2	<i>Digitizing with Digital Cameras</i>	430
21.7	<i>Film Recorders: Re-output Back to Film from Digital Files</i>	433
21.8	<i>Working with Photo Labs</i>	436
21.9	<i>Slide Mounts</i>	437
21.10	<i>Storage</i>	438
21.11	<i>Projectors</i>	441
21.12	<i>Synchronized Slide Shows</i>	446
21.13	<i>Fading of Slides and Estimating When to Change Sets During Display</i>	448
21.14	<i>Conclusion</i>	449
22	<i>Caring for Software- and Computer-Based Art</i>	453
	<i>Deena Engel, Tom Ensom, Patricia Falcão, and Joanna Phillips</i>	
22.1	<i>Introduction</i>	453
22.2	<i>Collecting Software- and Computer-Based Art</i>	456

22.2.1	<i>What Is the Artwork? Understanding the Intended Experience</i>	457
22.2.2	<i>Researching the Meaning, Making, History, and Context</i>	458
22.2.3	<i>Identifying the Anatomy of the Work</i>	461
22.2.4	<i>Artwork Inspection</i>	461
22.2.5	<i>Conducting Risk Assessment for Preservation</i>	464
22.2.6	<i>Collecting Preservation-Relevant Components, Information, and Rights</i>	467
22.3	<i>Understanding Your Software-Based Artwork</i>	470
22.3.1	<i>What Is Hardware?</i>	470
22.3.2	<i>Analyzing and Documenting Hardware</i>	478
22.3.3	<i>Hardware Failure and Obsolescence</i>	480
22.3.4	<i>What Is Software?</i>	481
22.3.5	<i>Types of Software</i>	483
22.3.6	<i>Analyzing and Documenting Software</i>	484
22.3.7	<i>Software Obsolescence</i>	487
22.3.8	<i>Programming Languages and Platforms and Their Preservation Implications</i>	488
22.3.9	<i>Specific Artwork Genres and Preservation Considerations</i>	492
22.4	<i>Preservation and Treatment of Software-Based Art</i>	496
22.4.1	<i>Introduction to Environment Intervention Strategies</i>	496
22.4.2	<i>Environment Maintenance</i>	496
22.4.3	<i>Environment Migration</i>	497
22.4.4	<i>Environment Emulation</i>	498
22.4.5	<i>Choosing an Environment Intervention Approach</i>	500
22.4.6	<i>Emulation in Practice</i>	501
22.4.7	<i>Introduction to Code Intervention</i>	503
22.4.8	<i>Code Migration</i>	503
22.5	<i>Conclusion</i>	505
23	<i>A Word About Performance Art</i>	512
	<i>Hélia Marçal</i>	
23.1	<i>Introduction</i>	512
23.2	<i>Time-Based Media and Performance Art</i>	513
23.3	<i>Performance Art and the Museum</i>	514
23.4	<i>Perspectives on the Conservation of Performance Art</i>	515
23.5	<i>Conclusion: From Emerging Practice to Sustained Development</i>	517
	<i>List of Contributors</i>	521
	<i>Index</i>	544