

Contents

1 Preface	1
1.1 Preamble	1
1.2 Publications	2
1.3 Adoptions	5
2 Introduction	7
2.1 Methodology	10
2.2 Evaluation	13
2.3 Related Work	16
3 Museums, Virtual Museums And Curating	25
3.1 Museums And Virtual Museums	26
3.2 Exhibition Design	34
3.3 Curator Tasks	38
3.4 Discussions With Curators	42
3.5 Digital Curation And Co-curation	48
3.6 Curator Survey	49
3.7 Curator Software	51
3.8 Presenting Virtual Museums – A Technical Perspective	59
3.9 Conclusion	62
4 Metadata	67
4.1 Definition	67
4.2 Museum Documentation	70
4.3 Virtual Museum, Virtual Environment, Learning Object And Architectural Standards	75
4.4 Metadata Requirements For Digital Museum Environments	78
4.5 ViMCOX	80
4.6 Conclusion	107
5 Architecture	109
5.1 Generative Virtual Museums	109
5.2 Modeling Capabilities	111
5.3 Workflow	115
5.4 Tool Classes	116
5.5 Conclusion	130

6 Show Case: The Virtual Leopold Fleischhacker Museum	135
6.1 Leopold Fleischhacker	136
6.2 Drafted Exhibition Layout	136
6.3 Outdoorareas	138
6.4 Digitization And Metadata Enrichment	139
6.5 Interior Modeling	140
6.6 Outdoorarea Modeling	142
6.7 User Interface, HUD, Presentation And Virtual Tours	144
6.8 Kiosksystem Exhibition	145
6.9 Usability And Utility Evaluation	146
6.10 Cave Automated Virtual Environment (CAVE) At The RWTH Aachen University	157
6.11 Evaluation On-site At The Düsseldorf Memorial To The Victims Of Persecution	160
6.12 Conclusion	161
7 Conclusion	163
List of Figures	167
List of Tables	169
Bibliography	171
A Appendix	189
A.1 Curator Questionnaire	190
A.2 Usability Questionnaire	216
A.3 Schema Documentation	233