# Contents

**Introduction** .................................................. xi

Everado REYES-GARCIA

**Chapter 1. From Controversies to Decision-making: Between Argumentation and Digital Writing** .................................. 1

Orélie DESFRICHES-DORIA

1.1. Introduction ................................................. 1
1.2. Hypertexts and hypermedia ............................... 2
1.3. From decision-making to the study of controversies ........................................ 3
   1.3.1. Definition of the concept of controversy ........ 3
   1.3.2. Shifts from one situation to another ............. 4
   1.3.3. Controversy representation ......................... 5
   1.3.4. Some controversy visualization and processing tools and methods .................. 7
1.4. Detailed presentation of Vesta Cosy .................... 9
1.5. What is the content of argument representations?  14
   1.5.1. Interactions between the two fields ............... 14
   1.5.2. Theoretical approaches to argumentation .......... 16
   1.5.3. Hypermedia structure in the process of decision-making map construction with Vesta Cosy .... 19
1.6. Application of Vesta Cosy to controversy analysis .... 22
   1.6.1. Characterization of the nature of a controversy ... 22
   1.6.2. Methodological principles of controversy analysis . 24
1.7. New digital writings with hypermedia ................. 29
   1.7.1. Extension of reasoning and paradigm shift .... 29
Chapter 2. Training in Digital Writing
Through the Prism of Tropisms: Case
Studies and Propositions.

Stéphane Crozat

2.1. Abstract .............................................. 37
2.2. Introduction ........................................... 37
2.3. Issue: theoretical approach to digital technology ................. 38
  2.3.1. The possibility of mechanizing intellectual labor ........... 38
  2.3.2. Digitization of content ........................... 39
  2.3.3. “It has been manipulated”: manipulation as a source of digital content ............................................................................................................. 40
  2.3.4. “And it will be again”: manipulation as the future of digital content ............................................................................................................. 41
2.4. Proposition: tropisms of digital content .............................. 42
  2.4.1. The concept of tropism .................................. 42
  2.4.2. Modeling of functional tendencies of digital objects ................................. 44
2.5. Detailed description of tropisms ..................................... 44
  2.5.1. Abstraction: it has been coded and will be recoded .......... 44
  2.5.2. Addressing: it has been found and will be found again ............. 45
  2.5.3. Connection: it has been transmitted and will be retransmitted .............. 46
  2.5.4. Duplication: it has been copied and will be recopied .......... 46
  2.5.5. Transformation: it has been changed and will be changed again ............................................................................................................. 47
  2.5.6. Universality: it has been integrated and will be reintegrated ................................. 48
2.6. Application: training in digital technology with tropisms .......... 48
  2.6.1. Training in ordinary digital writing at the University of Technology of Compiègne (UTC) ............................................................................................................. 48
  2.6.2. BABA strings (abstraction and polymorphism) ................. 49
  2.6.3. SolSys string (staging, hypertextualization) .................. 51
  2.6.4. BD string (transclusion, interactivity) .......................... 53
### Chapter 2.7. Case study: training in digital writing at IFCAM

- **2.7.1. Introduction to training** .................................................. 53
- **2.7.2. Training scenario** .......................................................... 54
- **2.7.3. An experience to increase awareness using Etherpad** .......... 54
- **2.7.4. Understanding the properties of digital technology and theoretical content** .......................................................... 56
- **2.7.5. Assignment 1: analysis of practices** .................................. 57
- **2.7.6. Part two: reading and writing, second assignment (critical observation)** .......................................................... 57

### Chapter 2.8. Perspective: a MOOC “digital literacy” project

- **2.8.1. Defining information literacy** ............................................ 58
- **2.8.2. Defining digital technology** .............................................. 59
- **2.8.3. Issue: teaching information literacy** .................................. 60
- **2.8.4. Components of teaching information literacy** .................... 61
- **2.8.5. Format: challenges of MOOCs** ........................................ 62
- **2.8.6. Proposition: content and scenario for an information literacy MOOC** .......................................................... 64

### Chapter 2.9. Conclusion and perspectives

### Chapter 2.10. Acknowledgments

### Chapter 2.11. Further reading

### Chapter 2.12. Bibliography

### Chapter 3. Assessing the Design of Hypermedia Interfaces: Differing Perspectives

María Inés LAITANO

- **3.1. Man–machine interaction** ............................................... 70
  - **3.1.1. Fundamental principles of usability** ................................ 70
  - **3.1.2. Cognitive engineering** ............................................. 72
- **3.2. Mediated human activity** ................................................ 74
  - **3.2.1. The Danish school** ................................................. 76
  - **3.2.2. Instrumental psychology** .......................................... 78
- **3.3. Meaningful systems** ...................................................... 80
  - **3.3.1. Semiotic engineering** .............................................. 80
  - **3.3.2. The sociocognitive model** ....................................... 84
  - **3.3.3. Semiotic scenario** ................................................. 86
- **3.4. Three mediations: three ways of evaluating a design?** ........... 88
- **3.5. Bibliography** ............................................................... 93
Chapter 4. Experience Design: Explanation and Best Practices

Leslie MATTÉ GANET

4.1. Several problems identified with interface creation ................................. 99
  4.1.1. Users have difficulty too often ........................................ 99
  4.1.2. An awkward practice of Experience Design ............................. 99
  4.1.3. A difficult beginning for Experience Design in France .................. 100
  4.1.4. Ill-defined jobs .......................................................... 101
  4.1.5. Manufacturers at various XD maturity levels ............................. 102
4.2. What is good Experience Design? .................................................. 104
4.3. How does Experience Design work? ............................................... 106
  4.3.1. A method, more than a result ............................................ 106
  4.3.2. Focused on humans ....................................................... 106
  4.3.3. A transformed project management ...................................... 106
  4.3.4. New professions ......................................................... 108
  4.3.5. Tools in DX ............................................................... 112
4.4. A powerful approach ........................................................................ 114
  4.4.1. XD protects from rejection ................................................ 114
  4.4.2. XD allows for an important gain in time ................................ 115
  4.4.3. The XD facilitator ......................................................... 116
4.5. Example of XD contribution to an industrial project .......................... 116
  4.5.1. Creating the Website with classic project management ................. 117
  4.5.2. Revising the Website with XD project management .................... 121
4.6. How can we improve the quality of Experience Design in the ICT industries? .......................................................... 124
  4.6.1. A team with an open mind and empathy ................................ 124
  4.6.2. Co-design, creativity, ideation and respiration ........................ 124
  4.6.3. Good skills for appropriate responsibilities .............................. 125
  4.6.4. The systematic presence of the user and going into the field ....... 126
  4.6.5. No longer using the term UX ............................................ 126
4.7. Conclusion ..................................................................................... 127
4.8. Bibliography .................................................................................. 128

Chapter 5. Designing Authoring Software Environments for the Interactive Arts: An Overview of Mobilizing.js

Dominique CUNIN

5.1. Research context: artistic practices of interactivity ............................. 131
  5.1.1. Art and technique in the face of the digital ................................ 131
  5.1.2. An idea: an authoring software environment ............................ 134
Chapter 5. Computer graphics, game engine, art engine?

5.2. Reusability

5.2.1. Reusability

5.2.2. Game engine: when the metaphor and the objective design the tool

5.2.3. Programming for the interactive arts: toward complexity

5.2.4. Art engine, an authoring environment possibility?

5.3. Mobilizing.js: an attempt at a multi-paradigmatic authoring software environment

5.3.1. Artistic technical conduct and critical technical practice

5.3.2. An engine with many speeds

5.4. Structure and results of Mobilizing.js

5.4.1. Overview of a technical sequence

5.4.2. Constructing interactivities

5.4.3. Interactive, immersive and collaborative system

5.5. Conclusion

5.6. Bibliography

Detecting Underlying Assumptions and Expected Practices in the Digital Humanities through the AIME Project.

Donato RICCI, Robin DE Mourat, Christophe LeCLERCQ and Bruno LATOUR

6.1. Abstract

6.2. Introduction

6.3. AIME and its digital humanities set-up

6.4. Methodology: multiplying listening devices

6.5. Anomaly family #1: displacements in acknowledging on-and-offline practices ecosystem

6.6. Anomaly family #2: interface-driven methodology and its encounters with scholarly publics

6.7. Anomaly family #3: the shock of collaboration’s ethos

6.8. Qualifying anomalies for a better understanding of Digital Humanities projects

6.9. Bibliography

List of Authors

Index