

TABLE OF CONTENTS

| | |
|---|------------|
| Preface | V |
| Summary of contents | VII |
| Part I Preliminaries – Aernout Schmidt | 1 |
| 1. Peer-to-Peer Problems | 3 |
| 2. The World According to Lessig | 5 |
| 3. Cultural and Institutional Theories | 6 |
| 4. The Morality of Regulation by Architecture | 8 |
| 5. Structure | 8 |
| Part II The Morality of Regulation by Architecture – Aernout Schmidt | 11 |
| 1. IT as a Relevant Discipline | 13 |
| 2. Asking a Question | 15 |
| 2.1 Roles in IT practice | 16 |
| 2.2 The story | 17 |
| 2.3 Booting | 18 |
| 2.3.1 Some history: Moore's law, law, standards | 19 |
| 2.3.2 The operating system | 22 |
| 2.3.3 Handles for regulation during boot | 24 |
| 2.4 The desktop | 25 |
| 2.4.1 As a part to the operating system: policies | 26 |
| 2.4.2 As a port to applications: stand-alone, client-server, peer-to-peer | 26 |
| 2.5 Two application semantics, four efficiencies (intermezzo) | 27 |
| 2.5.1 The reference approach | 28 |
| 2.5.2 The convention approach | 30 |
| 2.5.3 Application characteristics by convention | 31 |
| 2.6 Asking a question (summing up) | 34 |
| 3. Regulation by Design and Deployment | 35 |
| 3.1 Application design methodology | 35 |
| 3.1.1 The ITdesign framework Sections | 37 |
| 3.1.2 The ITdesign framework Chapters | 37 |
| 3.1.3 Remodelling Napster | 38 |
| 3.2 Regulation by design and deployment (summing up) | 48 |
| 4. The Morality of Regulation by Architecture | 48 |
| 4.1 Eight conditions | 49 |
| 4.1.1 Moral challenges for regulation by architecture | 52 |

| | | |
|-----------------|---|-----|
| 4.2 | Five questions | 53 |
| 4.2.1 | Is regulation by architecture a one-way projection of authority? | 53 |
| 4.2.2 | Who can make legitimate regulation by architecture? | 54 |
| 4.2.3 | What are the institutional roles? | 55 |
| 4.2.4 | What are the role moralities involved? | 56 |
| 4.2.5 | How is interaction placed in regulation by architecture and its administration? | 56 |
| 4.2.6 | Basic assumptions on the morality of regulators by architecture | 57 |
| 4.3 | The morality of regulation by architecture | 57 |
| 4.3.1 | Morality of duty (M1) | 58 |
| 4.3.2 | Morality of aspiration (M2) | 62 |
| Part III | The Economics of P2P in Music – <i>Wilfred Dolsma</i> | 63 |
| 1. | Introduction | 65 |
| 2. | Markets for Information Goods | 67 |
| 3. | Some Economics of Intellectual Property Rights | 71 |
| 3.1 | The music industry: digitisation | 72 |
| 4. | Market Standards, Business Models and Future Music | 77 |
| 5. | Three Models Assessed | 85 |
| 6. | Products & Prices: Welfare Implications | 88 |
| 7. | Conclusions | 92 |
| Part IV | Intellectual Property Rights for Music File Sharing – <i>Wim Keuvelaar</i> | 93 |
| | Preface | 95 |
| 1. | Approach | 95 |
| 1.1 | Copyright, neighbouring rights and file sharing | 95 |
| 1.2 | Problem definition | 96 |
| 1.3 | Context | 97 |
| 1.4 | Restrictions to the research project | 98 |
| 1.5 | Research goal | 98 |
| 1.6 | Plan of work | 98 |
| 2. | The WIPO Treaties | 99 |
| 2.1 | Introduction | 99 |
| 2.2 | Exploitation rights | 99 |
| 2.2.1 | The right of reproduction | 99 |
| 2.2.2 | The right of distribution | 100 |
| 2.2.3 | The right of rental | 100 |
| 2.2.4 | The right of communication and making available to the public | 101 |
| 2.3 | Limitations | 102 |
| 2.4 | Exercise and enforcement | 102 |
| 2.5 | Technical protection measures | 102 |

| | | |
|-------|---|-----|
| 3. | The Application of Copyright and Neighbouring Rights | 103 |
| 3.1 | Introduction | 103 |
| 3.2 | The right of reproduction | 103 |
| 3.3 | The right of distribution | 105 |
| 3.4 | The right of rental | 106 |
| 3.5 | The right of communication and making available to the public | 106 |
| 3.6 | New questions and problems | 107 |
| 4. | The Application of the Restriction of Private Copying | 108 |
| 4.1 | Introduction | 108 |
| 4.2 | Private copying in Directive 2001/29/EC | 108 |
| 4.3 | Private copying according to current law | 109 |
| 4.4 | Private copying according to future law | 110 |
| 4.5 | New questions and problems | 111 |
| 4.5.1 | The non-commercial criterion | 111 |
| 4.5.2 | A home copying levy on other equipment | 112 |
| 4.5.3 | Determining the amounts of fair contribution and retribution | 112 |
| 4.5.4 | The need for collective administration | 113 |
| 5. | The Exercise of Copyright and Neighbouring Rights | 113 |
| 5.1 | Introduction | 113 |
| 5.2 | Individual or collective | 113 |
| 5.3 | Exercising musical copyright | 114 |
| 5.4 | Exercising neighbouring rights with respect to music | 115 |
| 5.5 | New questions and problems | 116 |
| 5.5.1 | Legitimacy of collective administration organizations | 116 |
| 5.5.2 | Increasing importance of competition law | 117 |
| 5.5.3 | Territorial boundaries and (national) collective administration | 117 |
| 6. | The Enforcement of Copyright and Related Rights | 118 |
| 6.1 | Introduction | 118 |
| 6.2 | Civil law enforcement | 118 |
| 6.3 | Penal law enforcement | 118 |
| 6.4 | Directive on measures and procedures to ensure enforcement | 119 |
| 6.5 | Liability of software providers | 120 |
| 6.5.1 | Napster | 120 |
| 6.5.2 | Grokster and Streamcast | 121 |
| 6.5.3 | KaZaA | 123 |
| 6.6 | New questions and problems | 124 |
| 6.6.1 | Mass infringement and privacy | 124 |
| 6.6.2 | Careful behaviour of software providers | 125 |
| 7. | Digital Rights Management | 126 |
| 7.1 | Introduction | 126 |
| 7.2 | The legal framework for digital rights management | 126 |
| 7.3 | New questions and problems | 128 |

| | | |
|--------|--|-----|
| 7.3.1 | Position of 'open information' initiatives | 128 |
| 7.3.2 | Accountability, individual normative choice | 128 |
| 8. | Summary | 129 |
| 9. | Postscript | 129 |
| Part V | Understanding the War – Aernout Schmidt | 133 |
| 1. | Introduction | 135 |
| 1.1 | Mainstream IT, economic and legal analyses | 136 |
| 1.1.1 | IT | 136 |
| 1.1.2 | Economics | 137 |
| 1.1.3 | The law | 141 |
| 1.1.4 | Preliminary conclusions | 145 |
| 2. | Framing for Multidisciplinary Analysis | 146 |
| 2.1 | War | 148 |
| 2.1.1 | War and peace as a multilevel affair | 150 |
| 2.2 | Danger and dirt | 151 |
| 2.3 | Cultures | 152 |
| 2.4 | Monsters | 153 |
| 2.5 | Organizations | 155 |
| 2.6 | Domain and jurisdiction – organizations as normative systems | 156 |
| 2.6.1 | Intermezzo: an interpretation of law-system morality | 159 |
| 2.7 | Externalities | 161 |
| 2.8 | Markets | 162 |
| 2.9 | Institutions | 163 |
| 2.10 | Multidisciplinary institutional analysis | 166 |
| 3. | Institutional Analysis of the War on Music-file Sharing | 168 |
| 3.1 | Regularities in social behaviour | 169 |
| 3.1.1 | The music industry | 169 |
| 3.1.2 | Sharers | 169 |
| 3.1.3 | Providers | 169 |
| 3.1.4 | Courts | 170 |
| 3.1.5 | Two questions | 170 |
| 3.2 | Institutional analysis | 171 |
| 3.2.1 | Collective interests | 171 |
| 3.2.2 | Domains | 172 |
| 3.2.3 | Markets | 173 |
| 3.2.4 | Rule-sets | 174 |
| 3.2.5 | Policies | 176 |
| 3.2.6 | Norm-sets | 178 |
| 3.2.7 | Organizations | 179 |
| 3.2.8 | Individuals | 182 |
| 3.2.9 | (Market) feedback mechanisms | 184 |

| | | |
|--------------------------|--|-----|
| 3.2.10 | Belief-sets | 187 |
| 3.3 | The war path | 188 |
| 4. | Recommendations and Conclusions | 190 |
| 4.1 | Institutional understanding | 190 |
| 4.1.1 | Monster, monster domains, monster markets | 190 |
| 4.1.2 | Monster-managements strategies | 193 |
| 4.2 | Institutional interpretation | 194 |
| 4.2.1 | The battles over hacked containers: piracy and private use | 195 |
| 4.2.2 | The battle over unprotected containers: sharing | 197 |
| 4.3 | Recommendations | 202 |
| 4.4 | Conclusions | 202 |
| 4.5 | Afterthought | 204 |
| References | | 205 |
| About the authors | | 213 |