CONTENTS

Preface xv
About the Editors xxi
About LESI xxiii

Part 1
TERRITORIAL COMMENTARIES

1 Licensing and Technology Transfer to China: A Roadmap 3
   by Henry Beck and Xichun (Catherine) Pan
   Introduction 3
   “Free Riding” Past and Present 3
   China Joins the World Economy 4
   Intellectual Property Protection and Enforcement 5
      Intellectual Property Rights Have Little Extraterritorial Force 5
      International Treaties and Conventions/Trade Remedies 5
      China’s Intellectual Property Protection Regimes 7
      Enforcement of Intellectual Property Rights and the Threat of Trade Sanctions 9
   U.S. and Chinese Export and Import Control Regulations: “Outbound” and “Inbound” 17
   U.S. Export Control Regulations 17
   China’s Regulations for Technology Imports and Exports 22
   Concluding Thoughts 24

2 Software Licensing as a Driver of the Indian Economy 27
   by Rani Boazz and Subramaniam Vutha
   Introduction 27
      Background 27
      The Scope of the Chapter 29
   The Economic Impact of Software Licensing in India and Current Business Trends 29
   The Legal Framework for Software Licensing in India 32
      Copyright Law 32
      Contracts 32
      Trade Secrets Law 32
      Patent Law 33
      Taxes and Duties 33
      Reproduction of Software in India 34
      Insights into the Special Needs and Legal Requirements of the Indian Software Market 34
### Contents

Outlook for the Indian IT Industry 35

#### 3 The Industrialization of Korea (1962 to 2002) from the Patenting and Licensing Perspective 37

*by Yoon Bae Kim*

**Introduction** 37

Overview of the Korean Economy and Trends in Technological Development According to Historical Dates 38

- Before 1962 (Japanese Colonial Rule and the Korean War) 38
- From 1962 to 1991 (National Economic Development Plans) 39
- From 1992 to the First Half of 1997 (between the Post-Economic Development Plan and the Foreign Currency Crisis) 42
- From the Second Half of 1997 to 2002 (Foreign Currency Crisis and Innovation-Led Economic Growth) 43

Key Indicators of the Korean Economy 44

Key Indicators of Korea’s Macrotechnological Capability 45

The Impact of the Korean Patent System and Licensing Regulation on Korea’s Technological Development 47

- The Patent System 48
- Formulation of Law on Protection of Computer Program Copyright 49
- Licensing Regulation 50

Patenting and Licensing Trends by Industry 52

- Chemicals (Petrochemicals and Fine Chemicals) 53
- Shipbuilding 54
- Steel and Iron Manufacturing 55
- Automobiles 56
- Aerospace 56
- Semiconductors 57
- Electronics and Telecommunications 58

Conclusions 59

#### 4 Japan on Its Way to Revitalization 63

*by Jinzo Fujino*

**Introduction** 63

Overview of Technology Trade 64

Shifting to a New Knowledge-Based Economy 65

Overhauling Japan’s Intellectual Property Scheme 66

Intellectual Property Promotion Plan 2004 67

- Creation of New Inventions 67
- Protection of Intellectual Properties 68
- Enhancing the Utilization of Intellectual Properties 69
- Promotion of the Contents Business 70
- Development of Human Resources in the Intellectual Property Arena 70

Protection from Foreign Counterfeits 70

Conclusions 71

Commentary 72
5 \textbf{Secrets of Successful Dealmaking in Asia}  
by Dennis Unkovic  
Introduction 75  
Factors Influencing Asian Business Deals 76  
Thailand 77  
Malaysia 78  
Singapore 79  
Indonesia 81  
Asian Diversity 82

6 \textbf{Modern Mexican Laws Governing Intellectual Property, Licensing, Antitrust, R&D, and Inventors' Rights}  
by Oscar M. Becerril and Hector E. Chagoya  
Introduction 83  
The Mexican Antitrust Law 84  
The North American Free Trade Agreement (NAFTA) 86  
The Freedom-to-Research Issue 87  
Benefiting from the Mexican Industrial Property and Licensing System: Some Hints 88  
Franchise Contracts 89  
Licensing in the Pharmaceutical Sector 89  
Licensing of Biotechnology 90  
Licensing of Copyrights 90  
R&D Contracts 91  
The Mexican Employees' Inventions System: Another Reason to Consider Mexico for R&D Activities 92  
Remuneration to Employees for Their Inventions under Mexican Law 93  
Patenting Controversial Technologies in Mexico 94  
Computer-Implemented Technologies 94  
Biotechnology 94  
Conclusions 95

7 \textbf{Licensing in Scandinavia: Home of Entrepreneurial Inventors, Industrialists, and Philanthropists}  
by Robert Goldscheider and Jonas Galiliksson  
Introduction 99  
Scandinavian Creativity 99  
Finland's Impact 100  
Success Factors 101  
"Scandinavian-Bred" Technology 102  
Karl V. Palmaer 102  
Haldex All Wheel Drive System 103  
Ole-Bendt Rasmussen 104  
Conclusions 106
x Contents

Part 2

SCIENTIFIC/issues

8 Global Innovation and Licensing Opportunities on the Internet 111
by John G. Palfrey, Jr.
Introduction 111
The Digital Media Revolution 112
The First Clash: Digital Music 112
The First Success: Apple’s iTunes 113
Globalization and the Internet 114
Outsourcing of Software Development Services 114
Open Source Software Development 115
Other Global Effects of the Information Technologies Boom 116
Looking Ahead: Web Logs, Syndication, and Aggregation 117
The Phenomenon of Web Logs 118
Really Simple Syndication 119
Conclusions 120

9 Energy and the Environment: Driving Technology and Licensing 123
by Walter G. Copan
Energy and Human Progress 123
Energy in the Petroleum Age 124
The Environment and Sustainability 127
Global Climate Change and Emissions Trading Markets 128
A Triple Bottom Line 130
New Technologies Driving Technology Transfer 130
Energy Efficiency and Resource Conservation 130
Green Buildings 131
Energy Efficiency and Emissions Control for Transportation 132
Electric and Hybrid Vehicles 133
Hybrid Vehicle License Strategies 133
Evolution of Fuels 134
Natural Gas Fuel 135
Biofuels 135
Distributed Power 136
Power Plants 137
Renewable Energy 137
The Hydrogen Economy 139
Fuel Cells 140
Venture Capital and Institutional Investment 140
The Role of Licensing in the Energy World 142
New Value Options for Licensing in Energy and the Environment 143
Risk Management Value 145
Emissions Reduction Value 145
Direct Policy Incentives 145
Reduced Resource Use 146
Corporate Social Responsibility 146
Societal Economic Benefits 146
Technology Transfer Value  147
Acknowledgments  147

10 Essentials of Licensing Biotechnology, Nanotechnology, and Other Cutting-Edge Technologies  151
by Manya S. Deehr and Mary Ann Stretch
Introduction  151
Definitions  152
Improvements  153
Field of Use  154
License Grant  154
Information, Data, and Results  155
Source of Intellectual Property: Federal Funding and Academic Contributions  156
License or Divestiture  158
Patent Sections  159
Conclusions  160

11 The Big Picture: Nanotechnology Impacts Everyone  163
by Robert C. Shaddox
Introduction  163
Licensing Nanotechnology  164
Overview  164
Definitions  165
Ownership/Encumbrances  166
Timing  167
Technology Licensing  168
Overview  168
Definition of Licensed Property/Licensed Products  168
Granting Clause  169
Termination Provisions  169
Consideration  169
Territory or Field of Use  170
Patent Protection  172
Infringement Actions  173
Confidentiality  175
Assignment and Sublicense  175
Conclusions  176

12 Ensuring Royalty Compliance in High-Technology Licensing  179
by Arthur M. Nutter
Introduction  179
Intellectual Property versus Real Property  179
High-Technology Licensing Programs  180
Phase One  180
Technical Investigations: Treasure Hunting  182
Courtroom Discovery versus Reverse Engineering  182
Analyzing Semiconductors  183
Part 3
BUSINESS, LEGAL, AND PROFESSIONAL ISSUES

13 Licensing Challenges Encountered by a Multinational Law Firm 191
by Michael A. Epstein
Introduction 191
Knowledge Management 192
Maintaining Geographical Spread 193
Providing Subject Matter Diversity 194
Utilizing Litigation Expertise 195
Preserving Experience as to Past Deals 197
Leveraging Relationships 198
Conclusions 198

14 Small Companies’ View of Licensing 201
by Norman A. Jacobs
Introduction 201
Acquiring Technology (Licensing In) 202
Granting Technology Rights (Licensing Out) 203
Identify Potential Licensees 204
Overcome the Confidential Disclosure Barrier 205
Consider a Joint Development Program 205
Define Fields of Use 206
Consider Novel Royalty Structures 206
Use a “Distress” License to Increase Product Sales 207
Determining the Value of Technology 207
Ensuring Licensee Diligence 208
Conclusions 209

15 Managing Intellectual Property Allocation in Joint Ventures 211
by Ron Laurie
Introduction 211
JV Structural Models 211
The Contractual Model 212
The Entity Model 212
The Two-Stage Model 213
Intellectual Property Allocation in General 214
The Default Allocation Paradigm: Joint Ownership 214
Preferred Intellectual Property Allocation Strategies 217
Application of Intellectual Property Allocation Strategies to the JV Structural Models 218
  The Contractual Model 218
  The Entity Model 220
  The Two-Stage Model 222
Exit Strategies 226
  Merger or Acquisition of the JV Entity 226
  Dissolution of the JV Entity 226
Conclusions 228

16 Experience in Norway with Strategic Alliances as a Work Form
  When Commercializing Technology 231
by Håkon Haugen and Tor Oppedal
Introduction 231
  The Particle Business in DYNO—and Beyond 231
From Idea to Market 232
Critical Success Factors for a Company Based on New,
  Advanced Technology 233
    Technology 233
    Infrastructure 233
    Products 233
    Market Apparatus 233
  Alternative Strategies 234
  DYNO's Particle Development: A Strategic Evaluation 234
Establishment and Execution of Strategic Alliances:
  A General Evaluation of Relationships 234
    Choice of Partner 235
    Establishing the Alliance 235
    Administration and Leadership of Joint Activities 236
Experiences of Dyno Particles: Examples 237
  Dynal Biotech ASA: Biomagnetic Separation 237
  Pharmacia Biotech AB: Chromatographic Purification of Biomaterial 238
General Conclusions Based on Our Experiences 239

17 Application of Game Theory to Intellectual Property
  Royalty Negotiations 241
by John C. Jarosz and Michael J. Chapman
Introduction 241
Usefulness of Game Theory 241
Bargaining Basics 243
  A Simple Bargaining Game 244
  An Intellectual Property Licensing Game 245
The Nash Bargaining Solution (NBS) 247
  Description 247
  Extension to Licensing 252
Estimation of NBS 258
  Disagreement Profits (d) 259
xv  Contents

Total Profits (Π) 260
Bargaining Power (α) 260
Conclusions 263

18  Administration and Auditing of License Agreements
to Promote Control and Harmony 267
by Margaret (Peggy) Moizel
Introduction 267
Management Plan for Maintaining Licensee Agreements 267
  Negotiation Steps 268
Inventory of Agreements 270
  Remuneration Calculation 270
Conclusions 272

Suggested Reading List 273

Index 279