

---

# **CYBER POLICY AND ECONOMICS IN AN INTERNET AGE**

# Topics in Regulatory Economics and Policy Series

## Michael A. Crew, Editor

Center for Research in Regulated Industries  
Graduate School of Management, Rutgers University  
Newark, New Jersey, U.S.A.

### Previously published books in the series:

- Awerbuch, S. and Preston, A.:  
*The Virtual Utility*
- Gabel, D. and Weiman, D.:  
*Opening Networks to Competition: The Regulation and Pricing of Access*
- Zaccour, G.:  
*Deregulation of Electric Utilities*
- Young, W.:  
*Atomic Energy Costing*
- Crew, M.:  
*Regulation Under Increasing Competition*
- Crew, M.A. and Kleindorfer, P. R.:  
*Emerging Competition in Postal and Delivery Services*
- Cherry, B.A.:  
*The Crisis in Telecommunications Carrier Liability:  
Historical Regulatory Flaws and Recommended Reform*
- Loomis, D.G. and Taylor, L. D.:  
*The Future of the Telecommunications Industry:  
Forecasting and Demand Analysis*
- Alleman, J. and Noam, E.:  
*The New Investment Theory of Real Options and its  
Implications for Telecommunications Economics*
- Crew, M. and Kleindorfer, P. R.:  
*Current Directions in Postal Reform*
- Faruqui, A. and Eakin, K.  
*Pricing in Competitive Electricity Markets*
- Lehman, D. E. and Weisman, D. L.  
*The Telecommunications Act of 1996: The "Costs" of Managed Competition*
- Crew, Michael A.  
*Expanding Competition in Regulated Industries*
- Crew, M. A. and Kleindorfer, P. R.:  
*Future Directions in Postal Reform*
- Loomis, D.G. and Taylor, L.D.  
*Forecasting the Internet: Understanding the Explosive Growth of Data*
- Crew, M. A. and Schuh, J. C.  
*Markets, Pricing, and Deregulation of Utilities*
- Crew, M.A. and Kleindorfer, P.R.  
*Postal and Delivery Services: Pricing, Productivity, Regulation and Strategy*
- Faruqui, A. and Eakin, K.  
*Electricity Pricing in Transition*

---

# CYBER POLICY AND ECONOMICS IN AN INTERNET AGE

Edited by

**William H. Lehr**

*Massachusetts Institute of Technology*

and

**Lorenzo M. Pupillo**

*Telecom Italia*



Springer-Science+Business Media, B.V.



Electronic Services <<http://www.wkap.nl>>

---

**Library of Congress Cataloging-in-Publication Data**

CYBER POLICY AND ECONOMICS IN AN INTERNET AGE  
William H. Lehr and Lorenzo M. Pupillo

ISBN 978-1-4757-3577-2      ISBN 978-1-4757-3575-8 (eBook)  
DOI 10.1007/978-1-4757-3575-8

A C.I.P. Catalogue record for this book is available  
from the Library of Congress.

---

**Copyright** © 2002 by Springer Science+Business Media Dordrecht  
Originally published by Kluwer Academic Publishers in 2002.  
Softcover reprint of the hardcover 1st edition 2002

All rights reserved. No part of this work may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, microfilming, recording, or otherwise, without written permission from the Publisher, with the exception of any material supplied specifically for the purpose of being entered and executed on a computer system, for exclusive use by the purchaser of the work.

Permission for books published in Europe: [permissions@wkap.nl](mailto:permissions@wkap.nl)  
Permissions for books published in the United States of America: [permissions@wkap.com](mailto:permissions@wkap.com)

*Printed on acid-free paper.*

*For Bouzha and Alexander*

– W.H.L.

*For Daniela, Cecilia, and Marianna*

– L.M.P.

# Contents

Acknowledgments	ix
<b>PART 1 Introduction</b>	<b>1</b>
Chapter 1. Living in an Internet Age	3
<i>William Lehr and Lorenzo Pupillo</i>	
<b>PART 2 The Policy Challenge</b>	<b>17</b>
Chapter 2. The Three Digital Divides	19
<i>Eli M. Noam</i>	
Chapter 3. Next Generation Internet: Where Technologies Converge and Policies Collide	27
<i>Michael R. Nelson</i>	
Chapter 4. Broadcasting Policy Hits the Internet	43
<i>Leonard Waverman</i>	
Chapter 5. Globalization and the Internet Challenge	61
<i>Antonio Pilati</i>	
<b>Part 3 The Internet Governance Challenge</b>	<b>71</b>
Chapter 6. Names, Numbers, and Global Governance	73
<i>Milton L. Mueller</i>	
Chapter 7. Intellectual Property and the Information Economy	95
<i>Julie E. Cohen</i>	

<b>PART 4 The Privacy Challenge</b>	113
Chapter 8. Protecting Privacy: The Canadian Experience <i>Helen McDonald</i>	115
Chapter 9. Economic Aspects of Personal Privacy <i>Hal R. Varian</i>	127
Chapter 10. Cybercrimes v. Cyberliberties <i>Nadine Strossen</i>	139
<b>PART 5 The Economics Challenge</b>	155
Chapter 11. Implications of Electronic Commerce for Fiscal Policy <i>Austan Goolsbee</i>	157
Chapter 12. P2P, Digital Commodities, and the Governance of Commerce <i>Alain Bourdeau de Fontenay and Eric Bourdeau de Fontenay</i>	169
Chapter 13. Spectrum Allocation and the Internet <i>Bruce M. Owen and Gregory L. Rosston</i>	197
Editors and Contributors	219
Notes	229
References	253
Index	265

# Acknowledgments

THE ORIGINAL impetus for this book came from a workshop we helped organize at the European Commission in Brussels in the fall of 1999. That workshop was hosted by the European Commission and co-organized by the MIT Research Program on Internet and Telecoms Convergence (<http://itc.mit.edu>) and by the Global Internet Project (<http://www.gip.org>), with financial support from Bell Canada and Telecom Italia. A number of the authors of this current volume participated in that workshop and presented talks that later gave rise to several of the chapters included here. Organizing that conference required the help and assistance of a large number of individuals in each of the organizations listed above. Although the list of those who helped is too long to cite here, several individuals were especially instrumental in arranging the financial support and administrative details that made both the workshop and this book feasible. These included (in alphabetical order): Merrick Berman, Richard Cawley, David Clark, Bernard Courtois, Sharon Gillett, Denis Henry, Michael Nelson, John Patrick, Agostino Ragosa, and Zachary Rolnik. And, of course, we owe a special debt and thanks to all of those who contributed chapters to this volume.