

| | |
|-------------------------|--|
| 1. Record Nr. | UNINA9910973804203321 |
| Titolo | The changing nature of telecommunications/information infrastructure // Steering Committee on the Changing Nature of Telecommunications/Information Infrastructure, Computer Science and Telecommunications Board, Commission on Physical Sciences, Mathematics, and Applications, National Research Council |
| Pubbl/distr/stampa | Washington, DC, : National Academy Press, 1995 |
| ISBN | 9786610193431 9780309176705 0309176700 9781280193439 1280193433 9780309586986 0309586984 9780585020020 0585020027 |
| Edizione | [1st ed.] |
| Descrizione fisica | 1 online resource (240 p.) |
| Disciplina | 384/.09 |
| Soggetti | Information superhighway - United States Telecommunication - United States |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Note generali | Bibliographic Level Mode of Issuance: Monograph |
| Nota di bibliografia | Includes bibliographical references. |
| Nota di contenuto | The Changing Nature of Telecommunications/Information Infrastructure -- Copyright -- Preface -- Contents -- Introduction and Overview -- PART 1-SETTING THE STAGE -- PART 2-REGULATION AND THE EMERGING TELECOMMUNICATIONS INFRASTRUCTURE -- PART 3- PUBLIC INVESTMENT IN INFRASTRUCTURE -- CROSS-CUTTING ISSUES -- Accommodating Rapid Technological Changes -- Standards and Standards Setting -- Democratization -- CONCLUSION -- REFERENCES -- NOTES -- Part 1 Setting the Stage -- Introduction to Part 1 -- The Evolution of the Telecommunications Infrastructure -- HOW THE TELECOMMUNICATIONS NETWORK BECAME DIGITAL -- THE ADVENT OF DIGITAL SWITCHING -- THE BOTTLENECK: LOCAL LOOP ACCESS -- THE |

PACKETIZING OF COMMUNICATIONS: ATM -- THE NEW
INFRASTRUCTURE -- THE USER VIEW OF INTERNET ECONOMICS -- THE
CONTRAST IN PHILOSOPHY BETWEEN THE INTERNET AND
TELECOMMUNICATIONS -- MULTIMEDIA AND THE FUTURE OF THE
INTERNET -- The Search for the Holy Paradigm: Regulating the
Information Infrastructure in the 21st Century -- DEFINITION OF THE
INFORMATION INFRASTRUCTURE -- REGULATION OF THE
INFRASTRUCTURE -- Goals of Regulation -- Liberty -- Equity --
Community -- Efficiency -- Participatory Access -- REGULATORY
PARADIGMS -- Stage 1: Scarcity -- Production -- Distribution Media --
Reception -- Summary of Stage 1 -- Stage 2: Abundance and
Competition -- Production -- Distribution Media -- Reception --
Summary of Stage 2 -- THE NEW COMPLEXITY -- Technological Trends
-- Economic Trends -- Sociological and Organizational Trends --
Political Trends -- Scientific Trends -- TOWARD A NEW REGULATORY
PARADIGM FOR TELECOMMUNICATIONS REGULATION -- MAJOR ISSUES
AHEAD -- Production -- Intellectual Property -- Content Controls --
Public Space and Information -- Distribution -- Infrastructure --
Universal Service -- Community -- Reception -- User Control --
Privacy -- Information Literacy.
CONCLUSION -- ACKNOWLEDGMENTS -- REFERENCES -- NOTES --
Current and Future Uses of Information Networks -- BACKGROUND --
THE IMPORTANCE OF INFORMATION NETWORKS -- A GOOD ECONOMIC
BET -- LIKELY DEVELOPMENTS -- Customer Interfaces -- Bank
Structure -- The Network as a Market -- The Network Structure -- The
Changing Nature of Telecommunications and the Information
Infrastructure for Health Care -- INTRODUCTION -- STIMULI TO
CHANGE -- RECOGNIZING THE NEED FOR IMPROVED CLINICAL DATA
SYSTEMS -- ATTRACTING PHYSICIANS TO INFORMATION MANAGEMENT
TOOLS -- EXAMPLE USES OF THE NII FOR HEALTH AND HEALTH CARE --
CONCLUSION -- REFERENCES -- Can K-12 Education Drive on the
Information Superhighway? -- NO MYSTERY AS TO THE EFFECTIVE
APPLICATIONS OF NEW COMMUNICATIONS TECHNOLOGIES -- SNAGS,
BARRIERS, AND ROADBLOCKS ON THE INFORMATION SUPERHIGHWAY
-- The Telecommunications Industry and K-12 Education -- The
Organization of Schooling -- K-12 Education and the Real Economy --
GETTING TO CRITICAL MASS: BUILDING THE 21ST-CENTURY
INFRASTRUCTURE FOR SCHOOLING -- GOVERNMENT INVESTMENT AND
REGULATION TOOLS TO GET K-12 TO CRITICAL MASS -- A Seat at the
Table -- REFERENCES -- NOTE -- Future Roles of Libraries in Citizen
Access to Information Resources through the National Information
Infrastructure -- INTRODUCTION -- UNIVERSAL ACCESS IN THE
NETWORKED INFORMATION CONTEXT -- LIBRARY ROLES IN UNIVERSAL
ACCESS TO ELECTRONIC INFORMATION -- LIBRARIES, INTELLECTUAL
PROPERTY, AND ELECTRONIC INFORMATION IN A NETWORKED
ENVIRONMENT -- THREATS TO PUBLIC LIBRARIES IN THE NETWORKED
ENVIRONMENT -- DIGITAL LIBRARIES AND LIBRARY SERVICES --
CONCLUSION: THE BROADER CONTEXT OF INFORMATION PUBLISHING
ON THE NII -- DISCUSSION -- Part 2 Regulation and the Emerging
Telecommunications Infrastructure -- Introduction to Part 2 --
REGULATION AND POLITICAL LEGITIMACY -- INSTRUMENTAL ANALYSIS
OF REGULATION.
SOME GENERAL CAVEATS -- IMPLICATIONS FOR EVALUATING
REGULATORY STRATEGIES -- VARYING VIEWS ON REGULATION --
REFERENCES -- NOTES -- Government Regulation and Infrastructure
Development -- WHAT IS INFRASTRUCTURE? -- WHERE IS THE NATURAL
MONOPOLY? -- THE REQUISITES OF PUBLIC POLICY -- Removal of Rate
Distortions -- Removal of Entry Barriers -- Deregulation of Noncore

Services -- Forbearance from Mandating Network Technology --
CONCLUSION -- REFERENCES -- NOTES -- State Regulatory Policies and
the Telecommunications/Information Infrastructure -- INTRODUCTION
-- CHANGES IN THE TELECOMMUNICATIONS INDUSTRY -- ROLE OF THE
TELECOMMUNICATIONS INFRASTRUCTURE -- IMPLICATIONS FOR
REGULATORY POLICY OBJECTIVES -- Traditional Regulatory Policy
Objectives in Telecommunications -- Progressive Regulatory Policy
Objectives -- Balancing Competing Objectives -- IMPLICATIONS FOR
STATE REGULATORY POLICIES -- Reducing Rate Distortions: California's
Implementation Rate Design -- Removing Entry Barriers to Local
Exchange Competition -- Deregulating Noncore Services and
Regulating the Price of Core Services: Price Cap Plans -- Kansas --
Michigan -- Nebraska -- Vermont -- North Dakota -- West Virginia --
CONCLUSION -- REFERENCES -- NOTES -- The Prospects for
Meaningful Competition in Local Telecommunications --
INTRODUCTION -- PROSPECTS FOR COMPETITION -- Cable Company
Competition with Telephone Companies -- Telephone Company
Competition with Cable Companies -- SUMMARY AND CONCLUSIONS
-- REFERENCES -- NOTES -- Regulation and Optimal Technological
Change: Not Whether, But How -- NOTES -- The Future of
Telecommunications Regulation: The Hard Work is Just Beginning --
INTRODUCTION -- PURPOSES OF REGULATION -- INFLATED MONOPOLY
RATES AS A CUSHION AGAINST COMPETITION -- RATEPAYERS AS
INVOLUNTARY INVESTORS -- CONCLUSION -- ACKNOWLEDGMENT --
REFERENCE -- NOTES.
Costs and Cross-Subsidies in Telecommunications -- REFERENCE --
Economic Ramifications of the Need for Universal Telecommunications
Service -- Discussion -- Part 3 Public Investment in
Telecommunications Infrastructure -- Introduction to Part 3 --
REFERENCE -- Government Investment in Telecommunications
Infrastructure -- INTRODUCTION -- A Note on Definitions -- FEDERAL
INVESTMENT IN TELECOMMUNICATIONS INFRASTRUCTURE -- Tax
Incentives -- Direct Support of Research, Development, and
Demonstrations -- Support of Telecommunications Networks and
Systems -- Development and Support of Applications -- Support of
Users -- Other Types of Federal Support -- SCALE OF FEDERAL
INVESTMENT IN INFRASTRUCTURE -- RATIONALES FOR DIRECT FEDERAL
SUPPORT -- DISCUSSION -- REFERENCES -- NOTES -- Federal
Investment Through Subsidies: Pros and Cons -- MARKET FAILURES --
INSTRUMENTS FOR GOVERNMENTAL FUNDING -- SUPPLY-SIDE AND
DEMAND-SIDE SUBSIDIES -- A STYLIZED MODEL --
Telecommunications Infrastructure from the Carrier's Point of View --
POINT ONE: PRIVATE-SECTOR INVESTMENT IS THE KEY TO
TOMORROW'S INFRASTRUCTURE -- POINT TWO: REGULATORY POLICY IS
CRITICAL TO PRIVATE-SECTOR INVESTMENT -- POINT THREE: THE
PUBLIC SECTOR HAS A ROLE IN INFRASTRUCTURE DEVELOPMENT --
CONCLUSION -- REFERENCES -- NOTES -- An Information Provider's
Perspective on Government Investment in the Telecommunications
Infrastructure -- SHOULD THERE BE ANY (OR MORE) GOVERNMENT
INVESTMENT IN INFRASTRUCTURE, FACILITIES, OR SERVICES? -- IS
THERE A BENEFIT FROM GOVERNMENT-PROVIDED SEED FUNDING? --
DO GOVERNMENT-SUPPORTED SERVICES REALLY PUT A MEANINGFUL
DAMPER ON INVESTMENT IN NEW OR BETTER SERVICES? -- HOW MUCH
GOVERNMENT INVESTMENT WOULD BE TOO MUCH? -- Economic
Dividends of Government Investment in Research and Technology
Development -- R&D AND COMPUTER TECHNOLOGY -- R&D
AND NETWORKING.
REFERENCES -- NOTES -- Perspective of the Noncarrier Transport

Provider -- REFERENCE -- Discussion -- Appendix Contributors And Participants.

Sommario/riassunto

Advancement of telecommunications and information infrastructure occurs largely through private investment. The government affects the rate and direction of this progress through regulation and public investment. This book presents a range of positions and perspectives on those two classes of policy mechanism, providing a succinct analysis followed by papers prepared by experts in telecommunications policy and applications.
