Record Nr. UNINA9910778439803321 Autore **Brock Gerald W Titolo** The second information revolution [[electronic resource] /] / Gerald W. **Brock** Cambridge, Mass., : Harvard University Press, 2003 Pubbl/distr/stampa **ISBN** 0-674-02879-1 Descrizione fisica 1 online resource (337 p.) Classificazione ZN 3136 Disciplina 384/.0973 Soggetti **Telecommunication** Information science Electronic information resources Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Bibliographic Level Mode of Issuance: Monograph Note generali Includes bibliographical references (p. 305-310) and index. Nota di bibliografia Nota di contenuto Frontmatter -- CONTENTS -- ACKNOWLEDGMENTS -- ABBREVIATIONS -- 1 Introduction -- 2 The First Information Revolution -- 3 Technological Origins of the Second Information Revolution, 1940– 1950 -- 4 The SAGE Project -- I The Separate Worlds of Computers and Communications, 1950-1968 -- 5 The Early Semiconductor Industry --6 The Early Commercial Computer Industry -- 7 The Regulated Monopoly Telephone Industry -- II Boundary Disputes and Limited Competition, 1969–1984 -- 8 Data Communications -- 9 From Mainframes to Microprocessors -- 10 The Computer-Communications Boundary -- 11 Fringe Competition in Long Distance Telephone Service -- 12 Divestiture and Access Charges -- III Interconnected Competition and Integrated Services, 1985-2002 -- 13 Mobile Telephones and Spectrum Reform -- 14 Local Competition and the Telecommunications Act of 1996 -- 15 The Internet and the World Wide Web -- 16 Conclusion -- References -- Index Sommario/riassunto Thanks to inexpensive computers and data communications, the speed and volume of human communication are exponentially greater than they were even a quarter-century ago. Not since the advent of the telephone and telegraph in the nineteenth century has information technology changed daily life so radically. We are in the midst of what

Gerald Brock calls a second information revolution. Brock traces the complex history of this revolution, from its roots in World War II

through the bursting bubble of the Internet economy. As he explains, the revolution sprang from an interdependent series of technological advances, entrepreneurial innovations, and changes to public policy. Innovations in radar, computers, and electronic components for defense projects translated into rapid expansion in the private sector, but some opportunities were blocked by regulatory policies. The contentious political effort to accommodate new technology while protecting beneficiaries of the earlier regulated monopoly eventually resulted in a regulatory structure that facilitated the explosive growth in data communications. Brock synthesizes these complex factors into a readable economic history of the wholesale transformation of the way we exchange and process information. Table of Contents: Acknowledgments Abbreviations 1. Introduction The Promise of Regulation Conceptual Framework 2. The First Information Revolution The Development of Telegraph Services The Telephone and State Regulation Radio and Federal Regulation 3. Technological Origins of the Second Information Revolution, 1940-1950 Radar The Transistor Electronic Digital Computers 4. The SAGE Project I. THE SEPARATE WORLDS OF COMPUTERS AND COMMUNICATIONS, 1950-1968 5. The Early Semiconductor Industry The Creation of a Competitive Market Innovation and the Integrated Circuit Falling Prices, Rising Output 6. The Early Commercial Computer Industry Vacuum-Tube and Transistor Computers The System/360 and IBM Dominance Alternatives to IBM Computers 7. The Regulated Monopoly Telephone Industry Antitrust and the 1956 Consent Decree Microwave Technology and Potential Long Distance Competition Central Office Switches Terminal Equipment II. BOUNDARY DISPUTES AND LIMITED COMPETITION, 1969-1984 8. Data Communications Packet-Switching and the Arpanet Network Protocols and Interconnection Local Area Networks and Ethernet 9. From Mainframes to Microprocessors Intel and the Microprocessor Personal Computers and Workstations 10. The Computer-Communications Boundary Computer-Assisted Messages: Communications or Data Processing? Smart Terminals: Teletypewriters or Computers? Interconnection of Customer-Owned Equipment with the Telephone Network The Deregulation of Terminal Equipment The Deregulation of Enhanced Services 11. Fringe Competition in Long Distance Telephone Service Competition in Specialized Services Competition in Switched Services The Transition to Optical Fiber 12. Divestiture and Access Charges The Divestiture Access Charges The Enhanced Service Provider Exemption III. INTERCONNECTED COMPETITION AND INTEGRATED SERVICES, 1985-2002 13. Mobile Telephones and Spectrum Reform Early Land Mobile Telephones Cellular Spectrum Allocation Cellular Licensing Problems Spectrum Institutional Reform PCS and Auctions 14. Local Competition and the Telecommunications Act of 1996 Competitive Access Providers Interconnection: CAP to CLEC The Telecommunications Act of 1996 Implementation of the Telecommunications Act of 1996 15. The Internet and the World Wide Web The Commercial Internet and Backbone Interconnection The Development of the Web The New Economy Financial Boom and Bust Real Growth in Telecommunication and Price Benefits 16. Conclusion Technological Progress and Policy Evolution The Process of Institutional Change Final Comment References Index Reviews of this book: The Second Information Revolution is important reading for anyone who needs to understand the functioning of American telecommunications, either to be able to analyse today's financial markets or to understand or influence public policy in this area.--Wendy M. Grossman, Times Higher Education Supplement [UK]Reviews of this book: Brock traces a phenomenon he

refers to as the 'second information revolution.' According to Brock, there have been two times in history when information technology has dramatically changed daily life. The first 'information revolution' occurred with the advent of the telephone and telegraph, which made communication less expensive and more readily available. The second information revolution is currently in progress. A concise, thorough, and well-written history of the transformation in exchanging and processing of information.--K. A. Coombs, Choice