## Contents

1 Setting the Stage: Money, Credit, and Payments in America
- The Federal Reserve System and National Check Clearing
- Early Charge Cards
  - Western Union and the Department Stores
  - The Oil Industry
  - The Airline Industry
- Travel and Entertainment Cards
  - Diners Club
  - American Express
- Bank-Issued Credit Cards
  - Early Bank Charge Card Systems
  - The BankAmericard
  - “The Drop”
  - Other Bank Credit Card Systems
- National Bankcard Associations
- Conclusion

2 Associating: Dee Hock and the Creation of the Organization
- Problems in the Licensing Program
  - A Typical Transaction in 1968
  - Operational Problems
  - Organizational Problems
  - Tensions Come to a Head
- Dee Hock
  - Hock’s Personality
  - Views on Organizations
  - Views on the Nature of Money
- Creation of National BankAmericard Inc.
  - Organizational Dreams
  - Organizational Realities
  - An New Kind of Organization?
- Conclusion
3 Crafting the Social Dynamics: Staffing, Operating Regulations, and Advertising .......................... 53
   Building a Staff .................................................. 54
   The Operating Regulations ................................. 56
      The Card and Marks ........................................ 57
      Inter-Organizational Work and Fees ................. 58
      Dispute Resolution ......................................... 62
      The Significance of the Operating Regulations .... 65
   National Advertising ........................................ 66
   Conclusion ....................................................... 68

4 Automating Authorization: BASE ........................................... 71
   The Need for Automated Authorization ................... 71
   Automating Local Authorizations .......................... 72
   Automating Interchange Authorizations ................... 76
   The Joint National Authorization System .................. 78
   NBI’s BASE ......................................................... 80
      Acquiring the Talent ....................................... 81
      Design of the System ....................................... 82
      The Development Process ................................ 85
      Effects of the New System ................................ 88
   Conclusion ....................................................... 90

5 Automating Clearing and Settlement: BASE II and III ......................... 91
   Truncating the Paper: BASE II ............................... 91
      Country-Club, Descriptive, and Facsimile Billing .... 92
      Design of BASE II ........................................... 95
      Final Development and Rollout ......................... 101
      Effects of the System .................................... 102
   Losing Focus: BASE III ....................................... 103
      Problems Begin to Emerge ................................ 104
      Problems Come to a Head ................................ 105
      Success in Failure ......................................... 106
   Conclusion ....................................................... 108

6 Expanding the System: Organizational and Technical Growth ................ 109
   Expanding the Organization .................................. 109
      IBANCO ......................................................... 110
      Antitrust and Dual Membership ............................ 113
      Adopting the Name VISA ................................... 117
   Expanding the Computer Systems ......................... 123
      Expanding BASE I’s Capacity .............................. 124
      Multiple Data Centers ..................................... 130
      Expanding Internationally ................................. 132
   Conclusion ....................................................... 134
7 Automating the Point of Sale: Encoding Standards and Merchant Dial Terminals

- Dreaming the Future: BASE IV
- Electronic Value Exchange
- Gems in the Rubble
- Encoding the Card: Magnetic Stripes and Magic Middles
- Encoding Options and Standards
- Magstripe Tracks
- Magstripe Security
- The Magic Middle
- Visa and the Magstripe
- Dialing for Dollars: The Merchant Dial Terminal Project
- Dial Terminals
- The Pilot Test
- Adoption Incentives
- Resolutions
- Adoption and Consequences
- Conclusion

8 Challenging Conceptual Barriers: EFT and the Debit Card

- Visa Synonymous with Credit, Debt, and Financial Distress?
- EFT Utopia, Dystopia and Reality
- Electronic Funds Transfer or Electronic Value Exchange?
- The “Asset Card” Concept
- NBI’s Asset Card
- “Credit Paranoia”
- Member Reactions
- Credit Cards vs. “Real” Banking
- Entrée vs. EFT
- Enter Entrée
- Conclusion

9 Negotiating Roles: Controversies and the End of an Era

- Visa Travelers Cheques
- A Brief Background of Travelers Cheques
- Visa’s Entry Into Travelers Cheques
- Reactions and Negotiations
- Launch
- The JC Penney Deal
- The Deal
- The Reactions
- Hock’s Departure
- Signs of Empire Building
- 101 California: Headquarters for an Empire
- The King is Dead. Long Live the King
- Hock’s Legacy
10  Conclusions: Toward a General Sociotechnical History of Payment Systems .......................................... 199
    Contribution to Grand Themes ........................................... 201
    Some New General Dynamics in Payment Systems and Cooperative Networks ........................................ 203
    Value Flows According to a Mark .................................... 204
    Networks, Boundaries, and Gateways .............................. 209
    Epilogue ................................................................. 216

Appendix   Core System Statistics ............................................ 219

References .................................................................... 223

Index ............................................................................ 237
Electronic Value Exchange
Origins of the VISA Electronic Payment System
Stearns, D.L.
2011, XXVIII, 240 p., Hardcover