

# RBOC DATA MARKET STRATEGIES, OPPORTUNITIES, AND FORECASTS

2001-2006  
Market Strategies  
Market Opportunities  
Market Forecasts



Pictures by Susie Eustis

**BROADBAND GROWS THE NUMBER OF ACCESS LINES**

Strategic Positions In Balance

Strategic Positioning Creates Market Opportunity

## RBOC DATA

MANY EXISTING MARKET OPPORTUNITIES

MANY NEW MARKET OPPORTUNITIES

PARTICIPANTS IN HIGH GROWTH DATA MARKET SEGMENTS

POSITIONS TO TAKE ADVANTAGE OF INTERNET OPPORTUNITIES

**WinterGreen Research, Inc.**

**Lexington, Massachusetts**

[www.wintergreenresearch.com](http://www.wintergreenresearch.com)

---

**The Study Gives Detailed Information About RBOC Data Market  
Participation**

---

---

---

---

Rboc Data strategies, opportunities, and forecasts  
POSITIONING TO PARTICIPATE IN HIGH GROWTH SEGMENTS  
MARKET STRATEGIES  
FORECASTS 2001 TO 2006

CHECK OUT THESE KEY TOPICS

*DATA AS A SIGNIFICANT ASPECT OF GLOBAL MARKET COMPUTING SYSTEMS*

Market Strategies for Voice over DSL

Internet Driving the Data Networking Market

Market Growth Opportunities

**RBOC Role in the Proliferation of the Internet**

*–ESTABLISHED AND EFFICIENT GLOBAL MANAGEMENT*

*INTERNET COMPUTING APPLICATIONS*

*EVOLUTION OF DATA SERVERS*

*MARKET FORECASTS*

*WORLDWIDE MARKET SHARES*

Data telecommunications is expected to become substantially larger than the traditional voice telephony market. The RBOCs have positioned to expand operations in the data communications market. Data communications over wireline facilities are facing explosive growth as supply chain efficiencies and partnering creates increasing demand for broadband communications.

### **Key Drivers In RBOC Data Growth:**

**Provision of digital data services**

**Demand for non-switched access lines**

**Demand for broadband**

**E-business demand for greater capacity per line than a traditional switched access lines**

**Internet growth**

**Supply chain automation**

**Evolution of high-capacity applications**

**Web hosting demand**

**Application services over a network**

### **REPORT METHODOLOGY**

This is the Fifty-first report in a series of market research reports that provide forecasts in communications, telecommunications, the internet, computer, software, and telephone equipment. The project leaders take direct responsibility for writing and preparing each report. They have significant experience preparing industry studies. Forecasts are based on primary research and proprietary data bases. Forecasts reflect analysis of the market trends in the segment and related segments. Unit and dollar shipments are analyzed through consideration of dollar volume of each market participation in the segment. market share analysis includes conversations with marketing directors,

distributors, leading market participants, and companies seeking to develop measurable market share. Over 200 in depth interviews are conducted for each report with a broad range of key participants and opinion leaders in the market segment.

**THE EVOLUTION OF DATA SERVERS IS AN INDICATION OF THE VALUE OF  
KEEPING DATA INDEPENDENT OF THE APPLICATIONS**

**IN WHICH IT IS PROCESSED.**

**NETWORK COMPUTING CHANGES MARKET DYNAMICS.**

**YOU MUST HAVE THIS STUDY**

## **Table of Contents**

### **RBOC DATA COMMUNICATIONS EXECUTIVE SUMMARY**

ES.1 Key Market Drivers	ES-1
ES.2 Summary RBOC Data Market Shares	ES-3
ES.3 Summary RBOC Data Forecasts	ES-5
ES.4 RBOC Access Line Equivalents	ES-6

### **RBOC Data Market Description**

1.1 Internet Driving Market	1-1
-----------------------------	-----

<b>1.2</b>	<b>Market Dynamics</b>	<b>1-3</b>
<b>1.2.1</b>	<b>Volume Of Data</b>	<b>1-5</b>
<b>1.3</b>	<b>IT Infrastructure</b>	<b>1-6</b>
<b>1.4</b>	<b>Quality Of Service (QoS)</b>	<b>1-9</b>
<b>1.5</b>	<b>Data Network Market Driving Forces</b>	<b>1-10</b>
<b>1.6</b>	<b>Network Segments</b>	<b>1-14</b>
<b>1.7</b>	<b>Optical Internet</b>	<b>1-14</b>
<b>1.7.1</b>	<b>Noncaptive Data</b>	<b>1-15</b>
<b>1.7.2</b>	<b>Independent Data Function</b>	<b>1-15</b>
<b>1.7.3</b>	<b>Intelligent Data Networks</b>	<b>1-16</b>
<b>1.8</b>	<b>Availability Of Information</b>	<b>1-17</b>
<b>1.9</b>	<b>Global Economy</b>	<b>1-18</b>
<b>1.9.1</b>	<b>Intensifying Competition On A Global Scale</b>	<b>1-21</b>
<b>1.10</b>	<b>Change In Data Markets</b>	<b>1-22</b>
<b>1.10.1</b>	<b>Packet-Switching Systems</b>	<b>1-24</b>
<b>1.11</b>	<b>Web Hosting</b>	<b>1-25</b>
<b>1.12</b>	<b>Web Hosting Market Driving Forces</b>	<b>1-28</b>
<b>1.13</b>	<b>Application Service Provider Provisioning</b>	<b>1-30</b>
<b>1.13.1</b>	<b>Data Center Market Driving Forces</b>	<b>1-31</b>
<b>1.13.2</b>	<b>Applications</b>	<b>1-32</b>
<b>1.13.3</b>	<b>Key Features Of Server Hosting Services</b>	<b>1-34</b>
<b>1.13.4</b>	<b>Application Hosting Markets</b>	<b>1-37</b>
<b>1.13.5</b>	<b>Application Availability</b>	<b>1-38</b>
<b>1.13.6</b>	<b>Application Service Provider (ASP)</b>	<b>1-39</b>
<b>1.13.7</b>	<b>Application Service Provider Companies (ASPs)</b>	<b>1-41</b>

## RBOC Data Communications Market Forecasts

2.1	RBOC Digital And Data Markets	2-1
2.2	Key Market Drivers	2-1
2.3	Growth Constraints	2-4
2.4	Strategic Benefits Offered RBOC Data Customers	2-5
2.5	Application Service Providers (ASP)	2-5
2.6	Broadband Applications	2-7
2.7	Summary RBOC Data Market Shares	2-8
2.8	Summary RBOC Data Market Segments	2-10
2.9	Summary RBOC Data Forecasts	2-10
2.10	RBOC ATM / Packet	2-12
2.10.1	RBOC ATM/ Packet Data Market Forecasts	2-14
2.11	RBOC Frame Relay	2-17
2.11.1	RBOC Frame Relay Data Services Market Forecasts	2-18
2.12	RBOC Leased Lines	2-20
2.12.1	Leased Line Market Driving Forces	2-23
2.13	RBOC DSL	2-24
2.13.1	Key Drivers In RBOC DSL Growth	2-31
2.13.2	ADSL, DSL Markets	2-32
2.13.3	DSL Integrated Network Solutions	2-33
2.14	Data Access Line Summary	2-34
2.14.1	RBOC Total Business Lines	
	Switched And Voice Line Equivalents	2-34
2.14.2	RBOC Switched Business Lines	2-36

2.14.3	RBOC Access Line Equivalents	2-39	
2.15	BellSouth Total And Data Access Lines		2-45
2.15.1	BellSouth Data Transport Services	2-45	
2.15.2	Bellsouth Wireless Data	2-47	
2.15.3	BellSouth Interactive Marketplace	2-47	
2.15.4	BellSouth Interactive Messaging Capabilities	2-47	
2.16	Qwest Data Access Line Summary		2-47
2.17	SBC Data Access Line Summary		2-49
2.18	Verizon Data Access Line Summary		2-52
2.18.1	Verizon Positioning	2-55	
2.18.2	Verizon DSL	2-55	

## RBOC Data Target Markets

3.1	Enterprise Business Units	3-1	
3.2	RBOC Data Target Services	3-2	
3.2.1	Interconnection Services	3-8	
3.2.2	Emerging Broadband Applications	3-10	
3.3	Internet Data Services	3-16	
3.4	Network Access Services	3-17	
3.5	Customer Premises Equipment (CPE)	3-17	
3.6	Unbundled Network Elements	3-18	
3.7	Digital Subscriber Lines (DSLs)	3-19	
3.8	Web Hosting	3-20	
3.9	Web Hosting Competitive Factors	3-20	

## **RBOC Strategic Positioning**

<b>4.1 RBOC Strategic Positioning For Data Communications</b>	<b>4-1</b>
4.1.1 Fiber Strategic Positioning	4-3
4.1.2 Qwest All-Optical Nationwide Network	4-3
<b>4.2 SBC Advanced Data Services</b>	<b>4-4</b>
4.2.1 SBC e-Tone	4-8
4.2.2 SBC's DSL Service	4-10
4.2.3 SBC Fiber	4-10
4.2.4 SBC DSL	4-11
4.2.5 SBC e-tone IBM and E*Trade Strategic Alliance	4-12
4.2.6 SBC Aggressively Migrates To Converged Voice, Data, Video Network	4-13
4.2.7 SBC Voice Trunking Over ATM	4-13
<b>4.3 Qwest</b>	<b>4-14</b>
4.3.1 Network Management	4-17
4.3.2 Qwest Communications All-Optical Nationwide Network	4-17
4.3.3 Qwest High Capacity Fiber Network	4-19
4.3.4 Qwest End To End Network	4-19
4.3.5 Qwest Use Of Advanced Technology	4-20
4.3.6 Qwest Network Management	4-22
<b>4.4 BellSouth Data Positioning</b>	<b>4-24</b>
4.4.1 Bellsouth Data Convenience Services	4-24
4.4.2 Bellsouth Data Directories	4-25
4.4.3 Bellsouth Digital And Data	4-25
4.4.4 BellSouth Wireless Data	4-28

4.4.5	BellSouth Midsize And Small Business Data Strategy	4-28
4.4.6	BellSouth IBM E-Business Alliance Strategy	4-30
4.4.7	Bellsouth / IBM E-Business Initiative Focused At Web-Enabling Small And Mid- Sized Businesses	4-31
4.4.8	BellSouth Big Business Strategy	4-33
4.4.9	Bellsouth Telecommunications Digital And Data	4-35
4.4.10	BellSouth Enterprise And Personal Wireless Data Solutions	4-36
4.4.11	Bellsouth Entertainment	4-38
4.5	Verizon	4-38
4.5.1	Verizon Marketing Of Data	4-41

## RBOC Company Profiles

5.1	Regional Bell Operating Companies (RBOCs)	5-1
5.2	Bellsouth	5-1
5.2.1	BellSouth Research And Development	5-2
5.2.2	Wireless	5-2
5.2.3	BellSouth 2000 Total-Revenues	5-3
5.2.4	Growth Sectors Of BellSouth Businesses	5-3
5.2.5	BellSouth Wireless	5-6
5.2.6	Strengths And Weaknesses Of BellSouth	5-6
5.3	Qwest	5-8
5.3.1	Qwest Partners	5-8
5.3.2	Alliance With Microsoft	5-10

5.3.3	Qwest High-Capacity Fiber Optic Network	5-11
5.3.4	Qwest Equity Investment In Rhythms To Position As Data DSL Provider	5-13
5.3.5	Qwest Investment In Covad To Position As Data DSL Provider	5-14
5.3.6	Strengths And Weaknesses Of Qwest	5-14
5.3.7	Qwest Revenue 2000	5-17
5.4	SBC Communications (SBC)	5-17
5.4.1	SBC End-To-End Service	5-18
5.4.2	SBC Acquisitions	5-18
5.4.3	SBC Prodigy Agreement	5-20
5.4.4	SBC / Sterling Commerce	5-20
5.4.5	SBC / DirecTV Agreement	5-21
5.4.6	SBC / Williams Communications	5-21
5.4.7	Puerto Rico Acquisition	5-21
5.4.8	Radiofone Acquisition	5-22
5.4.9	SBC Information And Entertainment	5-22
5.4.10	Directory And Electronic Advertising Services	5-22
5.4.11	Security Monitoring Services	5-23
5.4.12	Comcast Acquisition	5-23
5.4.13	Cable Television Services	5-23
5.4.14	Cable Television Licenses	5-24
5.4.15	In-Region Long Distance	5-24
5.4.16	SBC Revenue	5-25
5.4.17	SBC National-Local Trends	5-26
5.4.18	Strengths And Weaknesses Of SBC	5-26
5.4.19	SBC Project Pronto	5-30

<b>5.4.20</b>	<b>SBC Wireless</b>	<b>5-30</b>
<b>5.5</b>	<b>Verizon</b>	<b>5-31</b>
<b>5.5.1</b>	<b>Verizon Domestic Telecom</b>	<b>5-39</b>
<b>5.5.2</b>	<b>Verizon Global Wireless</b>	<b>5-40</b>
<b>5.5.3</b>	<b>Verizon Bell Atlantic / GTE Merger</b>	<b>5-42</b>
<b>5.5.4</b>	<b>Verizon Nationwide Wireless Venture</b>	<b>5-43</b>
<b>5.5.5</b>	<b>Strengths And Weaknesses Of Verizon</b>	<b>5-43</b>

# List Of Tables And Figures

## Market Forecasts 2001-2006 Market Shares 2000

Based on analysis of year 2000 revenue in multiple market segments

ES.1 Key Market Drivers	ES-1
ES.2 Summary RBOC Data Market Shares	ES-3
ES.3 Summary RBOC Data Forecasts	ES-5
ES.4 RBOC Access Line Equivalentents	ES-6

Table 1-1 1-2

Classic Network Elements

Table 1-2 1-4

Market Dynamics For Data Independent Of Computer

Table 1-3 1-5

Internet Applications Driving Adoption of Data Area Networks

Table 1-4 1-6

Information Data Systems Changing Balance

Table 1-5 1-7

Information Data Component Groups

Table 1-6 1-8

Types of Modules To Which Data Units Must Connect

Table 1-7 1-9

Quality of Service Variables

Table 1-8 1-11

Data Market Driving Forces

**Table 1-9            1-12**

**Market Changes From Messaging Middleware**

**Table 1-10        1-20**

**Market Forces For Global Economy**

**Table 1-11        1-21**

**Factors Impacting The Level Of Price And Product Competition**

**Table 1-12        1-22**

**Response To Competition**

**Table 1-13        1-23**

**Change in Local Data Communications Services**

**Table 1-14        1-26**

**Competitive Positioning For Web Hosting Markets**

**Table 1-15        1-27**

**Web Hosting Market Success Factors**

**Table 1-16        1-28**

**Web Hosting Market Driving Forces**

**Table 1-17        1-29**

**Web Hosting Market Positioning**

**Table 1-18        1-31**

**Data Center Market Driving Forces**

**Table 1-19        1-32**

**Applications Provided By ASPs**

**Table 1-20        1-35**

**Key Features Of Server Hosting Services**

**Table 1-21        1-36**

**Application Hosting Enhanced Services**

**Table 1-22      1-36**

**Factors Contributing to Ability to Manage Growth**

**Table 1-23      1-38**

**Data Application Availability Continuum**

**Table 1-24      1-39**

**Data Availability Ranges**

**Table 1-25      1-40**

**Functions of Application Service Providers (ASPs)**

**Table 1-26      1-41**

**Selected ASP Providers**

**Table 2-1      2-2**

**Key Drivers In RBOC Data Growth**

**Table 2-2      2-3**

**Uses of RBOC Data Communication**

**Table 2-3      2-4**

**RBOC Data Market Growth Constraints**

**Table 2-4      2-5**

**Strategic Benefits Offered RBOC Data Customers**

**Table 2-5      2-6**

**Functions Of Application Service Providers (ASPs)**

**Figure 2-6      2-9**

**RBOC Data Market Shares, 2000**

**Table 2-7      2-9**

**RBOC Data Market Shares, 2000**

**Table 2-8        2-10**

**RBOC Data Market Shares By Segment, Dollars, 2000**

**Figure 2-9        2-11**

**US. Data Communications Services Market Forecasts,**

**Dollars, 2000-2006**

**Table 2-10        2-11**

**US. Data Communications Services Market Forecasts,**

**Dollars, 2000-2006**

**Figure 2-11        2-13**

**RBOC ATM / IP Packet Market Shares, Dollars, 2000**

**Table 2-12        2-13**

**RBOC ATM / IP Packet Market Shares, Dollars, 2000**

**Figure 2-13        2-14**

**U.S. ATM / Packet Market Forecasts, Dollars, 2000-2006**

**Table 2-14        2-15**

**U.S. ATM / Packet Market Forecasts, Dollars, 2000-2006**

**Figure 2-15        2-17**

**RBOC Frame Relay Services Market Shares, Dollars, 2000**

**Table 2-16        2-18**

**RBOC Frame Relay Services Market Shares, Dollars, 2000**

**Figure 2-17        2-19**

**RBOC Frame Relay Market Forecasts, 2000-2006**

**In Millions of Dollars**

**Table 2-18      2-19**

**U.S. Frame Relay Market Forecasts, 2000-2006**

**In Millions of Dollars**

**Figure 2-19      2-21**

**RBOC Leased Line Market Shares, Dollars, 2000**

**Table 2-20      2-21**

**RBOC Leased Line Market Shares, Dollars, 2000**

**Figure 2-21      2-22**

**RBOC Leased Line Market Forecasts, Dollars, 2000**

**Table 2-22      2-23**

**RBOC Leased Line Market Forecasts, Dollars, 2000**

**Figure 2-23      2-25**

**RBOC DSL Subscriber Market Shares, 2000**

**Table 2-24      2-25**

**RBOC Projected DSL Subscriber Market Shares, 2001**

**Figure 2-25      2-26**

**RBOC Projected DSL Subscriber Market Shares, 2001**

**Table 2-26      2-27**

**RBOC Projected DSL Subscriber Market Shares, 2001**

**Figure 2-27      2-28**

**RBOC DSL Services Markets Shares, Dollars, 2000**

**Table 2-28      2-29**

**RBOC DSL Services Markets Shares, Dollars, 2000**

**Figure 2-29      2-30**

**RBOC DSL Subscriber Markets, Dollars, 2000**

**Table 2-30      2-31**

**U.S. DSL Services Market Forecasts, Dollars, 2000**

**Table 2-31      2-35**

**Total RBOC Access Lines, Number, 2000**

**Table 2-32      2-35**

**Total Access Lines, Percent 2000**

**Figure 2-33      2-37**

**RBOC Switched Access Lines as a Percent of**

**Total Switched Access Lines, 2000**

**Figure 2-34      2-38**

**RBOC Business Access Line Market Share, 2000**

**Table 2-35      2-39**

**RBOC Total Switched Access Line Market Shares, 2000**

**Figure 2-36      2-40**

**RBOC Switched Business Access Lines as a Percent of**

**Total Switched And Voice Grade Equivalent Access Lines, 2000**

**Figure 2-37      2-41**

**RBOC Voice Grade Equivalent Access Lines as a Percent of**

**Total Switched And Voice Grade Equivalent Access Lines, 2000**

**Figure 2-38      2-42**

**RBOC Voice Grade Equivalent and Switched**

**Business Access Lines as a Percent of**

**Total Switched And Voice Grade Equivalent Access Lines, 2000**

**Figure 2-39      2-43**

**RBOC Voice Grade Equivalent Access Line Market Shares, 2000**

## LIST OF TABLES AND FIGURES

**Figure 2-40**      2-44

**RBOC Total Switched and Voice Grade Equivalent**

**Access Line Market Shares, 2000**

**Table 2-41**      2-45

**Bell South Total Switched Access Lines By State, 1999 and 2000**

**Table 2-42**      2-48

**Qwest Business Access Lines, By State, 1999 and 2000**

**Table 2-43**      2-49

**Qwest Total Access Lines, By State, 1999 and 2000**

**Table 2-44**      2-50

**SBC Access Lines, 1999**

**Table 2-45**      2-51

**SBC Access Lines, 2000**

**Table 2-46**      2-52

**SBC Voice Grade Equivalents, 1999**

**Table 2-47**      2-52

**SBC Voice Grade Equivalents, 2000**

**Table 2-48**      2-53

**Bell Atlantic Switched Access Lines, 2000**

**Table 2-49**      2-54

**Verizon Access Lines, 2000**

**Table 2-50**      2-55

**Verizon / Northpoint Subscribers**

**Table 3-1            3-1**

**Enterprise Business Target Markets**

**Table 3-2            3-2**

**RBOC Data Target Services**

**Table 3-3            3-3**

**RBOC End-User Networking**

**Table 3-4            3-4**

**Types of RBOC Advanced Services**

**Table 3-5            3-5**

**Internetworking Services**

**Table 3-6            3-5**

**Network Optimization**

**Table 3-7            3-6**

**Video Services**

**Table 3-8            3-7**

**Interactive Multimedia Applications Services**

**Table 3-9            3-8**

**IP-Based Solutions**

**Table 3-10          3-9**

**Carrier Markets**

**Table 3-11          3-10**

**Interconnection Services Provided**

**Table 3-12          3-15**

## **LIST OF TABLES AND FIGURES**

**Table 3-13      3-16**

**Data Services Digital Product Categories**

**Table 3-14      3-21**

**Principal Competitive Factors In Web Hosting Market**

**Table 3-15      3-22**

**Web Hosting Market Success Factors**

**Table 4-1      4-2**

**RBOC Data Initiatives**

**Table 4-2      4-4**

**SBC Broadband Strategies**

**Table 4-3      4-5**

**SBC Broadband Strategic Alliances**

**Table 4-4      4-6**

**SBC Corporate Strategy for Data**

**Table 4-5      4-9**

**SBC Broadband Applications**

**Table 4-6      4-9**

**SBC Advanced Broadband-Powered Services**

**Table 4-7      4-13**

**SBC IBM, PeopleSoft, and E\*Trade Strategic Alliance**

**Table 4-8            4-21**

**Qwest's Network Security And Reliability Architecture**

**Table 4-9            4-23**

**Qwest Network Management Centers**

**Table 4-10          4-26**

**BellSouth Positioning On The Need For**

**Replacement Of Traditional Switched Access Lines**

**Table 4-11          4-29**

**BellSouth Midsize and Small Business Strategy**

**Table 4-12          4-34**

**BellSouth Big Business Strategy**

**Table 4-13          4-37**

**BellSouth Strategy To Serve The Interactive Marketplace**

**Table 4-14          4-37**

**BellSouth Positioning To Address The Needs Of The Transaction Market**

**Table 4-15          4-39**

**Verizon Strategic Positioning For Data Communications**

**Table 4-16          4-40**

**Verizon Northpoint Transaction Variables**

**Table 4-17          4-40**

**Verizon Northpoint DSL Positioning**

**Table 4-18          4-42**

**Verizon Video Services**

# LIST OF TABLES AND FIGURES

**Table 5-1            5-3**

**Growth Sectors of BellSouth Businesses in 2000**

**Table 5-2            5-5**

**BellSouth Customer Growth Market Drivers**

**Table 5-3            5-7**

**Strengths and Weaknesses of BellSouth**

**Table 5-4            5-9**

**Qwest Partners**

**Table 5-5            5-10**

**Qwest Network Resource Optimization Factors**

**Table 5-6            5-13**

**Qwest Network Advantages**

**Table 5-7            5-14**

**Strengths and Weaknesses of Qwest**

**Table 5-8            5-27**

**Strengths and Weaknesses of SBC**

**Table 5-9            5-39**

**Verizon Wireline Telecommunications Services Offerings**

**Table 5-10          5-41**

**Verizon Global Wireless Telecommunications Services**

**Table 5-11          5-42**

**Verizon Global Directory Domestic And International**

**Publishing Business Aspects**

Table 5-12      5-43

Strengths and Weaknesses of Verizon

**RBOC DATA COMMUNICATIONS MARKET DYNAMICS**

**MANY OF THESE KEY TOPICS HAVE PHENOMENAL SUBCATEGORIES**

## **ABOUT THE COMPANY**

**WinterGreen Research**, founded in 1985, provides strategic market assessments in telecommunications, communications equipment, health care, and advanced computer technology. Industry reports focus on opportunities that will expand existing markets or develop major new markets. The reports assess new product and service positioning strategies, new and evolving technologies, and technological impact on products, services, and markets. Market shares are provided. Leading market participants are profiled, and their marketing strategies, acquisitions, and strategic alliances are discussed. The principals of WinterGreen Research have been involved in analysis and forecasting of international business opportunities in telecommunications and advanced computer technology markets for over 30 years.

## **ABOUT THE PRINCIPAL AUTHORS**

**Ellen T. Curtiss**, Technical Director, co-founder of WinterGreen Research, conducts strategic and market assessments in technology-based industries. Previously she was a member of the staff of Arthur D. Little, Inc., for 23 years, most recently as Vice President of Arthur D. Little Decision Resources, specializing in strategic planning and market development services. She is a graduate of Boston University and the Program for Management Development at Harvard Graduate School of Business Administration. She is the author of recent studies on worldwide telecommunications markets and the Top Ten Telecommunications market analysis and forecasts.

**Susan Eustis**, President, co-founder of WinterGreen Research, has done research in communications and computer markets and applications. She holds several patents in micro-computing and parallel processing. She has patents on the first electronic voting machine, and has patent applications for new voting machines, new multi-processors, the operating system for the Internet, and has developed a new n-dimensional mathematics. She is the author of recent studies of the Regional Bell Operating Companies' marketing strategies, Internet equipment, a study of Internet Equipment, Worldwide Telecommunications Equipment, Top Ten Telecommunications, Digital Loop Carrier, Web Hosting, and Application Integration markets. Ms. Eustis is a graduate of Barnard College.

**ORDER FORM**

**Return To: WinterGreen Research, Inc.**

**6 Raymond Street**

**Lexington, MA 02421USA**

**Phone: (781) 863-5078 --- Fax: (781) 863-1235**

PLEASE ENTER MY ORDER FOR:

---

**Rboc DATA MARKET STRATEGIES  
FORECASTS TO 2006**

***-ALL REPORTS ARE AVAILABLE IN EITHER PRINT OR PDF -***

\_\_\_ ENCLOSED IS MY CHECK FOR \$2800      WEB SITE VERSION \$5,600

\_\_\_ PLEASE BILL MY COMPANY USING P.O.  
NUMBER \_\_\_\_\_

\_\_\_ PLEASE CHARGE MY MASTERCARD/VISA/AMERICAN EXPRESS--CARD NUMBER  
\_\_\_\_\_ EXP. DATE \_\_\_\_\_

\_\_\_ ADDITIONAL COPIES, @ \$375 (EXTRA COPY PRICE IN EFFECT ONLY WITH INITIAL ORDER)

SIGNATURE **X** \_\_\_\_\_ DATE \_\_\_\_\_

NAME \_\_\_\_\_ TITLE \_\_\_\_\_

COMPANY \_\_\_\_\_ DIVISION \_\_\_\_\_

ADDRESS \_\_\_\_\_ CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

TELEPHONE \_\_\_\_\_ FAX \_\_\_\_\_

*E-MAIL* \_\_\_\_\_

*PLEASE NOTE:* RESIDENTS OF MASSACHUSETTS AND CONNECTICUT MUST INCLUDE APPROPRIATE SALES TAX

SUBSCRIBERS OUTSIDE THE UNITED STATES MUST PROVIDE PREPAYMENT IN U.S. FUNDS