

WINTERGREEN RESEARCH, INC.

**High Availability Middleware and Server  
Telecommunications Market Opportunities, Market Forecasts,  
and Market Strategies, 2003-2008**

---

**HAHR Telecommunications Market Assessment**

---



*Picture by Susie Eustis*

**MOUNTAINS OF OPPORTUNITY**

**WinterGreen Research, Inc.  
Lexington, Massachusetts**

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

---

REPORT # L266302101

325+ PAGES

80+ TABLES AND FIGURES

2003

\$2,800

WINTERGREEN RESEARCH, INC.

## **CHECK OUT THESE KEY TOPICS**

*INTEGRATED TELECOMMUNICATIONS MIDDLEWARE,  
Industrial Process Control Systems,  
Commercial, Off-The-Shelf Building Blocks For Telecom  
Equipment And Middleware  
Market Opportunity*

*Driving Market Forces  
Integrated Telecommunications Middleware  
HIGH AVAILABILITY SERVERS FOR TELECOMMUNICATIONS  
CONTENT DIGITIZATION  
REAL-TIME LINUX  
CONTENT DIGITIZATION*

## ***OPPORTUNITY ABOUNDS***

**WinterGreen Research, Inc.  
Lexington, Massachusetts  
[www.wintergreenresearch.com](http://www.wintergreenresearch.com)**

## **High Availability Middleware and Server Telecommunications Market Opportunities, Market Forecasts, and Market Strategies, 2003-2008**

**High availability computing is positioned to be a major catalyst in revolutionizing the deployment of Web services. High availability is emerging as a platform of choice for data centers in every industry and for Internet servers due to its economic and management efficiencies.**

**IBM is the largest market participant in the sale of data networking equipment to enterprises is rapidly moving toward having significant voice transport capability. Motorola represents a primary new competitor in converged voice and data enterprise network solutions by virtue of dominating data router markets for the enterprise.**

**IBM and Tibco are the market leaders in breadth of product offering and substantial participation in the market with a broad set of infrastructure offerings. Tibco had strong market participation in application integration software license markets with 10.7% market share in 2002.**

**Specialized e-business connectivity companies include WebMethods. WebMethods had market participation of 9.5% EAI market share and was the number three market participant in terms of revenue. WebMethods has had market strength due to the ability to execute implementations in a timely manner and to Web enable servers.**

## **Companies Profiled**

### **Market Leaders**

**Adobe Systems**  
**Altova**  
**Arbortext**  
**BEA**  
**Brocade**  
**Candle**  
**Dell**  
**Diversified Technology**  
**Ensim**  
**F5 Networks**  
**Fiorano Software**  
**Francisco Partners / Global eXchange Services (GXS)**  
**GoAhead**  
**Hewlett Packard (HP)**  
**IBM**  
**InfiniCon Systems**  
**Intel**  
**IONA Technologies**  
**ItemField**  
**Kabira Technologies**  
**Microsoft**  
**Motorola Computer Group**  
**OmniCluster**  
**Red Hat**  
**RLX Technologies**  
**Solectron / Force Computers**  
**Sun Microsystems**  
**TeraForce**  
**Tatung Science and Technology Inc.**  
**Themis Computer**

**Tibco  
Vitria  
WebMethods  
WebEx Communications  
Wind River**

**High Availability Middleware and Server  
Telecommunications Market Opportunities,  
Market Forecasts, and Market Strategies, 2003-  
2008**

**REPORT METHODOLOGY**

THIS IS THE HUNDRED AND THIRTIETH 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. INSTALLED BASE ANALYSIS AND UNIT ANALYSIS IS BASED ON INTERVIEWS AND AN INFORMATION SEARCH. MARKET SHARE ANALYSIS INCLUDES CONVERSATIONS WITH KEY CUSTOMERS OF PRODUCTS, INDUSTRY SEGMENT LEADERS, MARKETING DIRECTORS, DISTRIBUTORS, LEADING MARKET PARTICIPANTS, OPINION LEADERS, 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 INDUSTRY LEADERS IN THE MARKET SEGMENT.

**YOU MUST HAVE THIS STUDY**

**High Availability Middleware and Server  
Telecommunications Market Opportunities, Market Forecasts,  
and Market Strategies, 2003-2008**

**Table of Contents**

**EXECUTIVE SUMMARY**

**HIGH AVAILABILITY / HIGH RELIABILITY SERVERS AND MIDDLEWARE FOR TELECOMMUNICATIONS**

<b>EXECUTIVE SUMMARY</b>	<b>ES-1</b>
Driving Forces For Adoption Of High Availability Computing	ES-1
High Availability Market Shares for Telecommunications	ES-3

**1. HIGH AVAILABILITY MIDDLEWARE AND SERVER TELECOMMUNICATIONS MARKET  
DYNAMICS AND MARKET DESCRIPTION**

1.1	Real-Time System Definition	1-1
1.2	Commercial, Off-The-Shelf Building Blocks For Telecom Equipment And Middleware	1-1
1.3	Integrated Telecommunications Middleware	1-3
1.4	Real-Time Linux	1-4
1.5	Content digitization	1-5
1.6	Real-Time Market	1-6
1.7	Simulation	1-8
1.8	Data Acquisition	1-10
1.9	Industrial Process Control Systems	1-11

**2.HIGH AVAILABILITY / HIGH RELIABILITY  
TELECOMMUNICATIONS MIDDLEWARE AND SERVER MARKET SHARES / FORECASTS**

2.1	Driving Market Forces	2-1
2.1.1	Next Generation Of Computing Technology	2-4
2.1.2	Benefits Of High Availability Servers	2-5
2.2	High Availability / High Reliability Telecommunications Middleware Market Shares	2-7
2.3	High Availability / High Reliability Telecommunications Server Market Shares	2-11
2.4	High Availability / High Reliability Telecommunications Middleware Market Forecasts	2-15
2.5	High Availability / High Reliability Telecommunications Server Market Forecasts	2-18
2.6	High Availability / High Reliability Telecommunications Market Forecasts	2-20
2.6.1	Forecasts By Line Size	2-24
2.6.2	Market Analysis By Line Size	2-24
2.6.3	Number Of Systems Shipped By Line Size	225
2.6.4	High Availability Operating System Market Opportunity Linux vs Windows Split	2-26

### 3. HIGH AVAILABILITY MIDDLEWARE AND SERVER TELECOMMUNICATIONS PRODUCT DESCRIPTION

3.1	High Availability Middleware for Telecommunications	3-1
3.1.1	GoAhead Software	3-1
3.1.2	GoAhead SelfReliant	3-2
3.1.3	GoAhead Software Instant Communications	3-3
3.1.4	GoAhead Software Modularity	3-5
3.1.5	Standard Building Blocks For GoAhead	3-8
3.1.6	Concurrent RedHawk Linux	3-9
3.1.7	Concurrent PowerWorks Linux Support	3-9
3.1.8	Concurrent iHawk Linux Strategy	3-10
3.1.9	Stratus	
	3-11	
3.1.10	Stratus IPSG (IP Signaling Gateway)	3-12
3.1.11	Stratus IP Message Transfer	3-12
3.1.12	Stratus ® Intelligent Network Applications	3-12
3.1.13	Sun Netra	3-13
3.1.14	Sun Netra Intelligent Storage Platform	3-17
3.1.15	Motorola Advanced High Availability Services for Linux	3-18
3.1.16	Motorola High Availability Tight Integration Of Hardware And Software	3-20
3.1.17	Motorola Checkpoint Services	3-21
3.1.18	Motorola Hot Software Upgrade	3-21
3.1.19	Convergent Software	3-22
3.1.20	Convergent Software Internet Enabled Supply Chain Execution Solution for Manufacturing and Distribution	3-24
3.1.21	BEA Systems Carrier-Grade Service Delivery Platform	3-25
3.1.22	IBM WebSphere® MQ Mission Critical Transaction Messaging	3-26
3.1.23	IBM Messaging For Collaboration	3-28
3.1.24	IBM Portfolio of Small / Medium Business Software	3-29
3.1.25	IBM DB2 Express	3-30
3.1.26	IBM Enterprise Instant Messaging (IM)	3-31
3.1.27	IBM Next Generation Collaboration	3-31
3.1.28	Router Based Wirespeed Messaging	3-32
3.1.29	Cisco Wirespeed Messaging	3-32
3.1.30	Wirespeed Integration Engines	3-39
3.1.31	Kabira	3-39
3.1.32	Kabira Wirespeed Messaging Solution	3-41
3.1.33	Kabira Infrastructure And Solutions Built On The OMG Model	3-41
3.1.34	Kabira Vertical Solution Frameworks	3-42
3.1.35	Kabira Automatic Generation of Adapters	3-43
3.1.36	Kabira Parlay/OSA Architecture	3-43
3.1.37	Kabira Parlay/OSA Framework	3-44
3.1.38	Kabira Service Package	3-46
3.1.39	Kabira Data Implementations	3-48
3.1.40	Kabira OSA Gateway	3-49
3.1.41	Message Frameworks	3-50
3.1.42	Candle Framework For Message Services	3-51
3.1.43	IBM WebSphere MQ Integrator	3-53
3.1.44	MQ Integrator	3-54
3.1.45	IBM Infrastructure For Real-Time Network	3-59

3.1.46	Business Need	3-60
3.1.47	MQ Integrator Platforms	3-62
3.1.48	WebMethods B2Bi Solution Suite	3-63
3.1.49	WebMethods Security Initiatives	3-63
3.1.50	WebMethods	3-64
3.1.51	WebMethods Message Broker Benefits	3-65
3.1.52	TIBCO ActiveEnterprise™ For Telecommunications	3-65
3.1.53	WebMethods Open Security Standards Initiative	3-66
3.1.54	IBM XML	3-69
3.1.55	Altova XML Editing Tools	3-69
3.1.56	Oracle XML	3-70
3.1.57	Altova And Oracle Integration Of XML	3-71
3.1.58	TIBCO Extensibility™	3-72
3.1.59	Oracle XML Portal Metadata Repository	3-72
3.2	High Availability Servers for Telecommunications	3-73
3.2.1	IBM eServer BladeCenter	3-74
3.2.2	IBM eServer BladeCenter Modular Technology	3-75
3.2.3	IBM Blade Platform Integration For On Demand	3-76
3.2.4	IBM Director Management Console	3-77
3.2.5	IBM™ BladeCenter Open architecture	3-78
3.2.6	Hewlett-Packard Company	3-78
3.2.7	Hewlett-Packard High Availability Operations (OSS/BSS)	3-78
3.2.8	Hewlett-Packard Mobile Operator Strategy	3-79
3.2.9	HP Mobile Applications Support	3-81
3.2.10	HP BCB and Telecom Solutions	3-85
3.2.11	HP Storage Area Network StorageWorks	3-85
3.2.12	HP ProLiant BL Features	3-86
3.2.13	Concurrent Computer Corporation	3-87
3.2.14	Concurrent iHawk® line of Intel/RedHawk® Linux® servers	3-90
3.2.15	Concurrent Products	3-90
3.2.16	Concurrent RedHawk	3-92
3.2.17	Concurrent iHawk Linux Strategy	3-92
3.2.18	Motorola AdvancedTCA	3-92
3.2.19	Motorola MXP Series: Multi-Service Packet Transport Platform	3-92
3.2.20	Stratus	3-95
3.2.21	The Stratus® ftServer Product Family	3-96
3.2.22	Stratus Continuum Server	3-98
3.2.23	Stratus Continuum	3-100
3.2.24	Stratus Continuum Servers	3-102
3.2.25	Convergent Technologies	3-102
3.2.26	Convergent Technologies Enterprise Realtime Systems	3-103
3.2.27	Convergent Technologies Web-Based Applications	3-103
3.2.28	Convergent Technologies Telecommunication and Wireless	3-103
3.2.29	Convergent Technologies Media and Video Broadcasting	3-105
3.2.30	Convergent Networks	3-106
3.2.31	Convergent Networks Cohesion™ Architecture	3-106
3.2.32	Continuous Computing General Availability	3-106
3.2.33	UTStarcom Suite Of Solutions	3-107
3.2.34	UTStarcom Softswitch and IP-based Switching Solutions	3-108
3.2.35	Sun Fire Blade Platform	3-108
3.2.36	Sun Secure Web Server	3-109

**4. HIGH RELIABILITY / HIGH AVAILABILITY SOFTWARE TECHNOLOGY**

4.1	Modular Component-Style Architecture For Servers	4-1
4.2	InfiniBand	4-1
4.2.1	InfiniBand (IB) Fabric Topology	4-4
4.3	Intel Ultra-Low Voltage Processors	4-5
4.4	Blade Interconnect Technology	4-8
4.5	Open Specification For Blade Servers	4-13
4.6	Open Application Programming Interfaces (APIs)	4-13
4.7	Intel	4-15
4.8	Linux	4-15
4.8.1	Linux on the Mainframe	4-16
4.8.2	Robust Unix and Windows-Based Systems	4-16
4.8.3	Mainframe Economics	4-17
4.8.4	Linux Capabilities	4-17
4.9	WebServices	4-18
4.10	Autonomic Computing Attributes	4-20
4.10.1	Autonomic Computing Architecture Framework	4-22
4.10.2	IBM Grid Computing	4-28
4.11	Graphics	4-29
4.12	Packet Computing Resource Board (PCRB)	4-30
4.13	Packet Processor Resource Board (PPRB)	4-31
4.13.1	Packet Voice Resource Board	4-31
4.14	Evolution of Appliances	4-32
4.15	Java Servlets and Java Server Pages	4-35
4.16	Enterprise JavaBeans	4-36
4.17	Partitioning	4-37
4.17.1	Workload Consolidation Alternatives	4-38
4.17.2	Dynamic Partitioning	4-38
4.17.3	Hardware Partitioning	4-39
4.17.4	Virtual Partitions	4-40
4.17.5	Hard partitions	4-40
4.18	Storage Innovation	4-43
4.19	Carrier Grade Linux	4-43
4.20	SSL	4-45
4.21	Butterfly Grid Video Gamers Online	4-46

**HIGH AVAILABILITY MIDDLEWARE AND SERVER TELECOMMUNICATIONS COMPANY PROFILES**

5.1	Adobe Systems	5-1
5.2	Altova	5-1
5.3	Arbortext	5-2
5.3.1	Arbortext Customers	5-3
5.4	BEA	5-3
5.4.1	BEA WebLogic	5-4
5.4.2	BEA Positioning	5-4
5.4.3	BEA Revenue	5-5
5.4.4	BEA Key Customers and Partners	5-7
5.4.5	BEA Momentum In Financial Services	5-9
5.5	Brocade	5-9
5.6	Candle	5-10

**WINTERGREEN RESEARCH, INC.**

5.6.1	Candle Supports Building Application Infrastructure Iteratively	5-11
5.6.2	Candle Corporation PathWAITM Modular Suite	5-13
5.6.3	Candle PathWAI Solution Portfolio	5-14
5.6.4	Candle PathWAI Dashboard for WebSphere Infrastructure	5-15
5.7	Dell	5-16
5.7.1	Dell Revenue	5-16
5.7.2	Dell Regional Market Participation	5-17
5.7.3	Dell Blade Servers	5-18
5.7.4	Dell Blade Server Positioning	5-19
5.7.5	Blades Reduce Complexity In The Network	5-21
5.7.6	Server Management Through Remote Capabilities	5-22
5.7.7	Gigabit Ethernet As A Backplane Technology	5-23
5.8	Diversified Technology	5-24
5.9	Ensim	5-24
5.10	F5 Networks	5-25
5.11	Fiorano Software	5-25
5.11.1	Fiorano Tifosi	5-26
5.11.2	Message Content Routing Solution	5-27
5.12	Francisco Partners / Global eXchange Services (GXS)	5-28
5.12.1	Francisco Partners	5-29
5.12.2	Global eXchange Services	5-29
5.12.3	GXS / UCCnet Strategic Alliance	5-30
5.12.4	GXS Transaction Outsourcing	5-31
5.13	GoAhead	5-34
5.14	Hewlett Packard (HP)	5-35
5.14.1	Hewlett Packard Positioning	5-36
5.14.2	Blade Server Positioning	5-36
5.14.3	HP Blade Server Partner Program	5-37
5.14.4	Hewlett Packard / Compaq	5-38
5.15	IBM	5-43
5.15.1	IBM Revenue	5-46
5.15.2	IBM Manufacturing Outsourcing	5-51
5.15.3	IBM On-Demand Supply Chain	5-52
5.15.4	IBM Acquires Holosofx	5-53
5.15.5	IBM / PricewaterhouseCoopers Consulting	5-55
5.15.6	IBM Acquires Rational Software	5-55
5.15.7	IBM Autonomic Computing Product Deployment Elements	5-60
5.16	InfiniCon Systems	5-63
5.17	Intel	5-65
5.18	IONA Technologies	5-65
5.18.1	Iona Revenue	5-68
5.18.2	Iona Customers	5-69
5.18.3	Iona Revenue	5-69
5.18.4	IONA Partnership Agreements	5-70
5.18.5	IONA Customers	5-70
5.18.6	IONA Products	5-70
5.18.7	IONA Acquires Integration from Software AG	5-71
5.19	ItemField	5-72
5.20	Kabira Technologies	5-74
5.20.1	Kabira Provisioning And Service Activation	5-75
5.20.2	Kabira Regional Market Presence	5-77
5.20.3	Kabira Customer Base	5-78

**WINTERGREEN RESEARCH, INC.**

5.20.4	Kabira Partners With Siebel	5-79
5.20.5	Kabira Technologies Solutions	5-80
5.21	Microsoft	5-81
5.21.1	Microsoft.Net	5-83
5.21.2	Microsoft BizTalk Server	5-85
5.21.3	Microsoft Strengths and Challenges	5-85
5.22	Motorola Computer Group	5-87
5.23	OmniCluster	5-88
5.23.1	OmniCluster Technologies / Products	5-89
5.23.2	OmniCluster Technologies / Check Point' Appliance SlotShield Firewall/VPN 3000	5-91
5.24	Red Hat	5-92
5.24.1	Red Hat WireSpeed	5-93
5.24.2	Red Hat Revenue	5-94
5.25	RLX Technologies	5-95
5.26	Solectron / Force Computers	5-96
5.27	Sun Microsystems	5-97
5.27.1	Sun Enterprise Systems Products	5-99
5.27.2	Sun Products	5-100
5.27.3	Sun Enterprise Systems Products	5-101
5.27.4	Sun Mid-Range Servers	5-101
5.27.5	Sun Workstations and Information Appliances	5-102
5.27.6	Sun Organizational Structure	5-103
5.27.7	Sun Business Strategy	5-104
5.28	TeraForce	5-105
5.28.1	TeraForce Technology	5-106
5.28.2	TeraForce Technology	5-107
5.29	Tatung Science and Technology Inc.	5-108
5.30	Themis Computer	5-108
5.31	Tibco	5-109
5.31.1	Tibco / Praja Business Activity Monitoring Dashboard Acquisition	5-111
5.32	Vitria	5-112
5.32.1	Vitria Revenue	5-114
5.32.2	Vitria Customers	5-114
5.32.3	Vitria Healthcare Solutions	5-115
5.33	WebMethods	5-116
5.33.1	WebMethods Revenue	5-118
5.33.2	WebMethods Customer Base	5-119
5.33.3	Government WebMethods	5-121
5.34	WebEx Communications	5-122
5.35	Wind River	5-122

**List of Tables and Figures**

Table ES-1	ES-1
High Availability Software Market Driving Forces	
Figure ES-2	ES-4
High Availability Telecommunications Middleware Market Shares, 2002	
Figure ES-3	ES-7
High Availability / High Reliability Telecommunications Server Market Shares, 2002	
Table 1-1	1-6
Real-Time Processing High Availability System Functions	
Table 1-2	1-7
General Purpose Computer Systems Real-Time Capabilities	
Table 1-3	1-9
Simulation Applications For Real-Time Systems	
Table 1-4	1-10
Data Acquisition Applications For Real-Time Systems	
Table 2-1	2-2
Principal Global Factors Of HA / HR Competition	
Table 2-2	2-3
High Availability Software Market Driving Forecast	
Table 2-3	2-4
High Availability Software Market Growth Drivers	
Table 2-4	2-5
Benefits of High Availability Servers	
Table 2-5	2-6
Benefits of High Availability Integrated Architecture	
Figure 2-6	2-8
High Availability Telecommunications Middleware Market Shares, 2002	
Table 2-7	2-9
High Availability Telecommunications Middleware Market Shares, Worldwide, 2002	
Table 2-8	2-11
Blade Computing Market Driving Forces	
Figure 2-9	2-14
High Availability / High Reliability Telecommunications Server Market Shares, 2002	
Table 2-10	2-15
High Availability Telecommunications Servers Market Shares, Worldwide, 2002	
Figure 2-11	2-17
Worldwide High Availability Telecommunications Middle ware, 2002-2008	
Table 2-12	2-18
Worldwide High Availability Telecommunications Middleware, 2002-2008	
Figure 2-13	2-19
Worldwide High Availability Telecommunications Servers, 2002-2008	
Table 2-14	2-19
Worldwide High Availability Telecommunications Servers, 2002-2008	
Figure 2-15	2-20
Worldwide High Availability Telecommunications Operating Systems , 2002-2008	
Table 2-16	2-21
Worldwide High Availability Telecommunications Operating Systems , 2002-2008	
Table 2-17	2-21
Worldwide High Availability Telecommunications Servers, Middleware, and Operating Systems, 2002-2008	
Table 3-1	3-4

GoAhead Software Instant Communications Middleware Features	
Table 3-2	3-6
GoAhead Software Middleware Features	
Table 3-3	3-7
GoAhead Software Target Markets	
Table 3-4	3-8
GoAhead Software State Management Features	
Table 3-5	3-14
Sun Netra Highly Available Applications	
Table 3-6	3-16
Sun Netra Target Markets	
Table 3-7	3-23
Convergent Software Development Methodology Phases	
Table 3-8	3-27
IBM WebSphere MQ Features	
Table 3-9	3-33
Cisco IP Communications System Components	
Table 3-10	3-36
Cisco AVVID Architecture	
Table 3-11	3-37
Cisco Service Control	
Table 3-12	3-38
Cisco Support for convergence of media types	
Table 3-13	3-40
Kabira Solution Framework Functions	
Table 3-14	3-44
Framework Benefits of Kabira Parlay/OSA APIs	
Table 3-15	3-45
Kabira Framework Database Organization	
Table 3-16	3-47
Kabira Service Package Functions	
Table 3-17	3-48
Kabira Data Implementations	
Table 3-18	3-49
Kabira Address Plan Management	
Table 3-19	3-54
IBM WebSphere MQ Integrator Functions	
Table 3-20	3-55
MQ Integrator Software Functions	
Table 3-21	3-57
IBM Integration Systems Functions	
Table 3-22	3-58
IBM Integration Systems Architecture	
Table 3-23	3-60
IBM Strategy For Integrating The Diverse Aspects Of Business	
Table 3-24	3-66
WebMethods Protocols	
Table 3-25	3-67
WebMethods Support For Security Standards	
Table 3-26	3-70
Oracle XML Features	
Table 3-27	3-72

TIBCO Extensibility Platform XML Infrastructure Solution	
Table 3-28	3-80
HP End-To-End Java Application Support	
Table 3-29	3-83
HP Mobile Solutions	
Table 3-30	3-88
Concurrent Real-Time Systems Target Applications	
Table 3-31	3-89
Concurrent Real-Time Systems Target Markets	
Table 3-32	3-93
Motorola MXP Series Multi-Service Packet Transport Platform Features	
Table 3-33	3-94
Motorola MXP Series Multi-Service Packet Transport Platform Functions	
Table 3-34	3-96
Stratus® Continuum® Family	
Table 3-35	3-99
Stratus Fault-Tolerant Server Functions	
Table 3-36	3-102
Convergent Technologies Core Areas Of Development	
Table 3-37	3-104
Convergent Technologies Telecommunication and Wireless Functions Supported	
Table 3-38	3-105
Convergent Technologies Integration	
Table 4-1	4-4
InfiniBand (IB) Fabric Topology	
Table 4-2	4-19
Web Services Technology Positioning	
Table 4-3	4-20
Autonomic Computing Functions	
Table 4-4	4-24
Autonomic Computing Leveraging E-Services	
Table 4-5	4-24
Autonomic Computing Systems Issues	
Table 4-6	4-26
Autonomic Computing Security Elements	
Table 4-7	4-26
Autonomic Computing Product Deployment Elements	
Table 4-8	4-42
Partitioning Dynamic Functionality	
Table 4-9	4-45
Creating a SSL Session	
Table 5-1	5-37
HP Ecosystem Of Compatible Blade Server Products	
Table 5-2	5-45
IBM Strengths and Challenges	
Table 5-3	5-61
IBM Autonomic Computing Product Deployment Elements	
Table 5-4	5-67
Iona Statistics	
Table 5-5	5-76
Results From Kabira Projects	
Table 5-6	5-78

Kabira Customers and strategic partners Table 5-7	5-81
Kabira Technologies Software Solutions Table 5-8	5-86
Microsoft Strengths and Challenges Table 5-9	5-117
WebMethods Integration Software Positioning	

**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, THE TOP TEN INTERNET EQUIPMENT COMPANIES, THE TOP TEN CONTRACT MANUFACTURING COMPANIES, 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 MICROCOMPUTING AND PARALLEL PROCESSING. SHE HAS THE ORIGINAL PATENTS IN ELECTRONIC VOTING MACHINES. SHE HAS NEW PATENT APPLICATIONS IN FORMAT VARYING, MULTIPROCESSING, AND ELECTRONIC VOTING. SHE IS THE AUTHOR OF RECENT STUDIES OF THE REGIONAL BELL OPERATING COMPANIES' MARKETING STRATEGIES, INTERNET EQUIPMENT, BIOMETRICS, A STUDY OF INTERNET EQUIPMENT, WORLDWIDE TELECOMMUNICATIONS EQUIPMENT, TOP TEN TELECOMMUNICATIONS, DIGITAL LOOP CARRIER, WEB HOSTING, WEB SERVICES, AND APPLICATION INTEGRATION MARKETS. MS. EUSTIS IS A GRADUATE OF BARNARD COLLEGE.

WINTERGREEN RESEARCH, INC.

ORDER FORM

Return To: WinterGreen Research, Inc.  
6 Raymond Street  
Lexington, MA 02421 USA  
Phone: (781) 863-5078 --- Fax: (781) 863-1235 or (781) 860-0897

PLEASE ENTER MY ORDER FOR:

High Availability Middleware and Server  
Telecommunications Market Opportunities,  
Market Forecasts, and Market Strategies,  
2003-2008

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

**PDF**

**PRINT**

\_\_\_ ENCLOSED IS MY CHECK FOR \$2,800 FOR SINGLE COPY, \$3,800 FOR WEB SITE POSTING

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

\_\_\_ PLEASE CHARGE MY MASTERCARD/VISA/AMERICAN EXPRESS—

CARD NUMBER \_\_\_\_\_ EXP. DATE \_\_\_\_\_

If charging to a Credit card you may e-mail the order form, but not the card information

Fax or Call with credit card information - Do not send card number as e-mail - You may send the order as e-mail

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

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

SIGNATURE \_\_\_\_\_

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

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE /

ZIP \_\_\_\_\_

TELEPHONE \_\_\_\_\_

FAX \_\_\_\_\_

EMAIL \_\_\_\_\_

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

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

REPORT # L266302101

325+ PAGES

80+ TABLES AND FIGURES

2003

\$2,800