



Picture by Susie Eustis

**Worldwide
Internet
Equipment
Markets:
Strategic Positions
Market Forecasts
Routers
Switches
Frameworks
Access Devices
Transport
New Network
New Architecture
Internet Growth**

Convergence Voice and Data

Network Core

Network Edge

Wire Speed

**Market Forecasts 1998 to
2003**

Market Strategies:

Carrier
Cable TV
Enterprise
Internet ISP
Appliances
New Provider
E-Businesses
E-Services
Value Added

**Worldwide Internet
Equipment Markets:**

Systems

WAN Architecture

Routers and Switches

Modems, Appliances, and LANs

The Study Addresses These Questions:

- *What are the high growth Internet network market segments?*
- *What are the driving forces in Internet Equipment markets?*
- *What are trends in Internet Equipment markets?*
- *Which partner strategies work?*
- *What strategic alliances work?*
- *How do companies position?*

➤ *How do partnerships work?*

COMPANIES PROFILED

3Com	Ericsson	NEC
Alcatel	Fujitsu	Newbridge
Cabletron	GEC / Fore	Nortel
Cisco Systems	Lucent / Ascend	Siemens

Other Companies Profiled

Actiontec / Adtran	IBM / Ironbridge	Shanghai Bell
Anritsu / Avici	Juniper / JNA	Shiva / Tellabs
Argon Networks	Linksys Group	Tut Systems
Best Data Products	Neowave / Opticom	Viking Telecom
Bosch / D-Link	Nexabit Networks	Wave systems
CommerceQuest	Phasecom / Perle	Xedia Corporation
Diamond Multimedia	Pluris / RAScom	Zoom Telephonics
Extreme Networks	Radiolan	
GVC / Hypercom	Shanghai Bell	

Report Outline -- EXECUTIVE SUMMARY

1 . INTERNET EQUIPMENT MARKET DYNAMICS

Voice Data Market	Industry Consolidation	Any-to-Any Networking
Networking Group Solutions	Carriers / ISP / ASP	Services / Mission-Critical
Customers / Markets	Value-Added Resellers	Long Distance Markets
Enterprise/Service Providers	Applications Networking	Routing / Access / Cable
Small/Medium Business	Changing Market Structure	Headend
	Internetworking Products	

2. TOP TWELVE INTERNET EQUIPMENT MARKET FORECASTS

Overview / Industry Growth	Super / Large ISP routers	ATM versus IP / DWDM
Net traffic / Driving forces	ISP routers / Desk / Medium	Access / Frame Relay/
Carriers / Enterprise / Client	Virtual Private Network/VPN	Concentrators /
Market Variables / Summary	Ethernet / Layer 2 / Layer 3	Hubs / NICs / Cable Modems
Routers and Switches	Gigabit Ethernet / Multilayer	Internet Appliances / xDSL
Routers / Gigabit / Terabit	Integrated Switching	

3. TOP TWELVE INTERNET EQUIPMENT PRODUCT DESCRIPTIONS

Switching / Packet Routing	3Com / Argon / Juniper	Nortel / Lucent / Motorola
Modular / Port Density	Avici / Torrent Networking	Voice Over IP / Lucent
Interface / Class-of-Service	Other Switch-Router Makers	Hubs / Remote / Cisco / 3Com
Low Power Consumption	Gigabit Ethernet Benefits	NICs / 3Com / Tektronix
Backbone / Stability / Flexible,	Foundry / ServerIron / Alteon	Video / Edge Device Modems
Scalable/Traffic Classes / VPN	ATM / Ascend / Juniper / Fore	3Com / Motorola / Zoom
Router Path / Switch	Newbridge / Siemens / 3Com	Handheld / 3Com / Alcatel
Router / Cisco Systems	ATM and DWDM Platform	

4. INTERNET EQUIPMENT TECHNOLOGY

Network Layer Architecture	Class-of-Service Flexibility	Connectivity Edge to Core
Carrier Router Architecture	Shape, Marking, Prioritizing	Dynamic Quality of Service
Business Partner Positioning	Network Design / Sonet	Modem Technology /-Duplex
Positioning for Change	Adapters / Power / Stability	Simultaneous Voice Data

Caller ID./ Distinctive Ring Mission-Critical Reliability
Plug and Play / IP Telephony Application- Networking

5. INTERNET EQUIPMENT COMPANY PROFILES

Consolidation / Acquisitions Lucent / NEC / 3Com
Alcatel / Cabletron / Cisco / Newbridge / Siemens
Ericsson / GEC / Fore Systems Nortel / Bay Networks

6. MORE INTERNET EQUIPMENT INTERESTING COMPANIES

Actiontec / Adtran / Argon GVC / Ironbridge / Juniper Shiva / Tellabs / Tut Systems
Avici / Best Data / Bosch JNA Telecommunications Wave Systems / Xedia / Zoom
Diamond Multimedia Systems Linksys / Nexabit Networks
D-Link / Extreme Networks NetCore / Perle / RAScom

7. INTERNET EQUIPMENT MARKET TRENDS

Cable Modems Anritsu / Hypercom Neowave . Opticom
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REPORT METHODOLOGY

This is the thirty sixth in a series of market forecasts of communications, telecommunications, Internet, and computer and telephone equipment. Internet equipment products are key to Internet growth. The project leaders have significant experience preparing industry studies, having written over 300. Forecasts are based on primary research and proprietary data bases. In-depth interviews are conducted with key vendor, users, and opinion leaders. Market directions provide focus.

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 microcomputing and parallel processing. She is the author of recent studies of the Regional Bell Operating Companies' marketing strategies, Internet equipment, and of a study of Internet and Intranet markets. Ms. Eustis is a graduate of Barnard College.

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