Communications Networks for the **Next Generation**



1999 ANNUAL REPORT

3 Chairman's Message

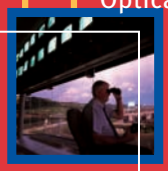
8 Service Provider Networks





12 Communications Software

14 Optical Networks



16 Wireless Networks





18 Enterprise Networks

20 Services and Support





22 Communications Semiconductors

26 Lucent at a Glance

27 Lucent Leadership

28 Board of Directors

29 1999 Financial Review

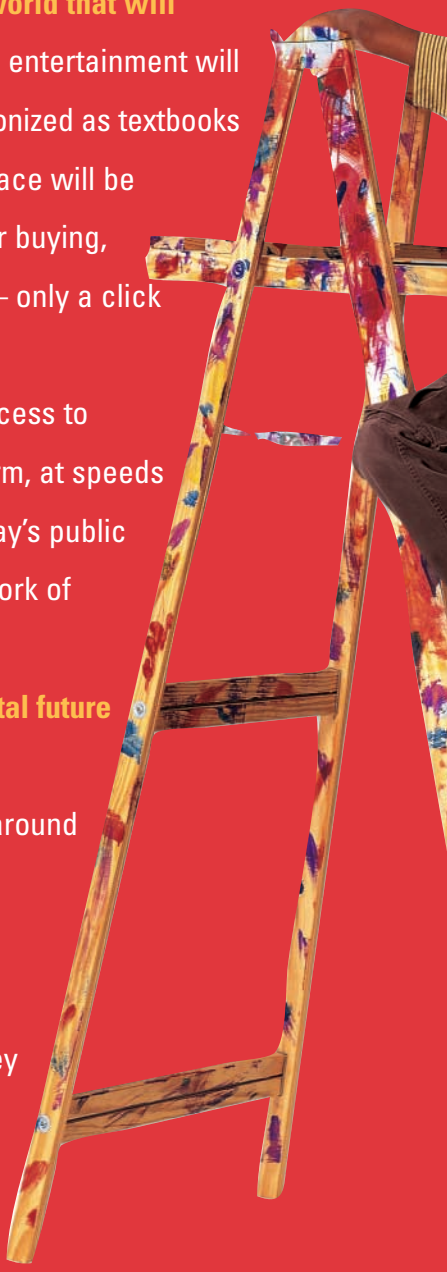
Lucent is Building **Next-Generation** Communications Networks **Now**

The next generation will live in a networked world that will simplify and enrich their lives. Information and entertainment will be delivered instantly. Education will be revolutionized as textbooks connected to networks come alive. The workplace will be wherever the worker needs it to be. Choices for buying, selling, working and playing will be unlimited — only a click or a voice command away.

Next-generation networks will make access to knowledge affordable and reliable — in any form, at speeds thousands of times faster than today. All of today's public and private networks will converge into a network of networks that's "always on."

For Lucent Technologies, **this bright digital future offers unprecedented growth**, as we take on the challenge of connecting millions of people around the world to information and to each other.

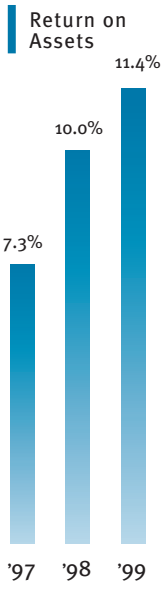
In the following pages, you'll learn that Lucent has a clear vision of next-generation networks, and unmatched strengths in every key technological building block, from systems and software to silicon and services. **At Lucent, the next generation begins today.**



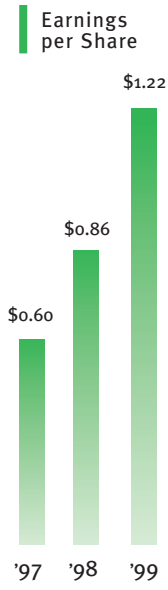




Revenues have increased 39 percent since 1997.



Return on assets has risen 4.1 percentage points since 1997. (see notes a, b and c)



Earnings per share have increased 103 percent since 1997. (see notes a, b, c and d)



Gross margin has risen 4.2 percentage points since 1997. (see notes a and c)

1999 FINANCIAL HIGHLIGHTS

(Dollars in millions, except per share amounts; unaudited)

	Year ended September 30 1999	Year ended September 30 1998	CHANGE
OPERATIONS			
Revenues	$38,303	$31,806	20.4%
Gross margin	$18,687 (a)	$15,091	23.8%
Selling, general and administrative	$ 8,166 (a)	$ 6,867	18.9%
Research and development	$ 4,496 (a)	$ 3,903 (b)	15.2%
Operating income	$ 6,025 (a)	$ 4,321 (b)	39.4%
Net income *(excluding certain one-time events)*	$ 3,833 (a)	$ 2,619 (b)	46.4%
Earnings per share-diluted(d) *(excluding one-time events)*	$ 1.22 (a)	$ 0.86 (b)	41.9%
FINANCIAL POSITION			
Total assets	$38,775	$29,363	32.1%
Working capital	$10,153	$ 4,899	107.2%
Shareowners' equity	$13,584	$ 7,709	76.2%
OTHER INFORMATION			
Capital expenditures	$ 2,215	$ 1,791	23.7%
Return on assets	11.4% (a)	10.0% (b)	1.4 points
Debt to total capital	34.1%	37.6%	(3.5) points
Stock price	$64 7/8	$34 5/8	87.4%

(a) *Excludes impact of $274 ($167 after-tax) gain associated with the sale of an investment in Juniper Networks, $337 ($270 after-tax) of merger, asset impairment and integration costs associated with Ascend and Nexabit and $282 ($272 after-tax) of costs associated with the acquisitions of Stratus Computer, Inc.; Quadritek Systems, Inc.; WaveAccess; Sybarus; and the Ethernet LAN business of Enable Semiconductor, as well as $1,308 (after-tax) gain from the cumulative effect of an accounting change related to pension and postretirement benefits. Including the impact of these charges and gain, Lucent reported net income of $4,766 and per share amount of $1.52.*

(b) *Excludes impact of $1,683 ($1,679 after-tax) of one-time charges associated with the acquisitions of Livingston Enterprises Inc.; Prominet Corporation; Yurie Systems, Inc.; Optimay GmbH; LANNET; SDX Business Systems plc; JNA Telecommunications Limited; MassMedia Communications Inc.; and Stratus Computer, Inc., as well as $149 ($95 after-tax) gain on the sale of Lucent's Advanced Technology Systems unit. Including the impact of these charges and gain, Lucent reported net income of $1,035 and per share amount of $0.34.*

(c) *1997 numbers exclude impact of $1,360 ($1,301 after tax) of one-time charges associated with the acquisitions of Octel Communications, Sahara Networks Inc. and InterCon Systems Corporation and the merger-related costs associated with the Whitetree, Inc. and Cascade Communications Corp. mergers. Including the impact of these charges, Lucent reported net income of $449 and per share amount of $0.15.*

(d) *All per share data reflect the two-for-one stock splits that became effective April 1, 1998, and April 1, 1999.*

Highlights For Fiscal Year 1999

1998

October

22 Winstar Communications and Lucent enter into a long-term strategic relationship worth $2 billion to build Winstar's fixed wireless broadband telecommunications network.

November

11 Lucent wins multimillion-dollar data networking contract to supply Asynchronous Transfer Mode equipment to the State Postal Bureau of the People's Republic of China.

December



8 Ken Thompson and Dennis Ritchie of Bell Labs are presented the U.S. National Medal of Technology by President Bill Clinton.

9 Lucent signs contract worth more than $90 million for optical networking and network management systems with four service providers in Europe and Asia.

1999

February

17 Lucent announces two-for-one stock split, the second such split in 12 months.

March



29 Lucent wins an expected $1 billion agreement to supply equipment and services for the next phase of AT&T's Digital PCS network.

31 Lucent's Microelectronics Group ranked world's fastest-growing top-20 semiconductor business by leading industry analyst Dataquest.

April



21 Sprint awards Lucent a $780 million, three-year contract for equipment and services for Sprint PCS' nationwide wireless network.

27 Bell Labs researchers announce production of a device with features as small as 80 nanometers; it's the smallest working electronic device ever made with optical lithography, the technology now used to make silicon chips.

28 Lucent unveils portfolio of products, called R/Evolutionary Networking, that will allow network operators worldwide to deliver over packet networks virtually every service and feature available on today's public network.

May

10 Lucent announces world's first single-chip Internet telephony solution, which allows us to design a solution that reduces the electronics costs of current Internet telephones.

June



2 Lucent's flagship 5ESS® switch sets new record, becoming the only switch in history to achieve 99.9999 percent up-time and continues to lead the industry in reliability, according to an analysis of a Federal Communications Commission report.

23 Level 3 Communications announces a minimum four-year, $250 million strategic agreement with Lucent to purchase software switches for IP networks. The agreement could grow to $1 billion over five years.

29 Telefonica selects Lucent as strategic supplier for the design and installation of an IP-based multiservice network for customers in 15 countries.

July

21 Lucent announces world's smallest optical amplifier module for high-speed optical transmission systems.

September

2 Lucent wins nine Synchronous Digital Hierarchy tenders, valued at more than $40 million, from Chunghwa Telecom for network equipment in Taiwan.

20 Bell Labs researchers George Smith and Willard Boyle receive the C&C Prize, one of the world's top honors for pioneers in computing and communications, for their invention of the charge-coupled device.

We're Building **New Networks** for a New Millennium

To Our Shareowners:

Lucent Technologies had another record year of growth in revenues and net income. It was also a strong year for creating new customer relationships and for delivering innovative products to market.

I am pleased to report that this year Lucent was recognized as the global leader in the communications networking market and in more than a dozen high-growth market areas (see list on page 6). We achieved that leadership by growing faster than the market and by taking market share. Now, to continue this momentum, we've reinvented our company once again to help us sustain high-performance growth and build on our leadership in the increasingly global marketplace.

The industry in which we operate has never been more dynamic. At a growth rate of more than 14 percent a year, the market will approach $815 billion by 2003. That growth is being propelled by customer demand for next-generation networks: converged networks that deliver new services in any form — voice, data or video. This is creating a wealth of opportunity for Lucent.

Not only is the communications industry fast-growing, it's rapidly changing as well. A number of service providers have merged so they can address customer needs for a broader array of services. Thousands of new service providers have emerged to offer telephone and Internet services. Cable TV service providers are



Richard A. McGinn
Chairman and Chief Executive Officer

Recent **Acquisitions**

International Network Services
Network consulting, design and integration; based in Sunnyvale, Calif.

SpecTran
Designer and manufacturer of multi-mode and specialty optical fibers; Sturbridge, Mass.

CCOM
Developer of directory solutions and Computer Telephone Integration software; Edison, N.J.

Nexabit Networks
Developer of high-performance Internet protocol (IP) wide area network (WAN) equipment; Marlborough, Mass.

Batik Equipamentos
Manufacturer of compact digital switching systems; Belo Horizonte, Brazil.

Zetax Tecnologia
Digital central office switching equipment and special technology; Valinhos, Brazil.

Mosaix
Provider of software that links firms' front and back offices and helps them deliver more efficient customer service; Redmond, Wash.

Enable Semiconductor (Ethernet LAN business)
Privately held developer of fast Ethernet and Gigabit Ethernet transceivers; Milpitas, Calif.

Sybarus Technologies
Privately held semiconductor design company; Ottawa, Canada.

Ascend Communications
Leading provider of WAN core switching and access data networking equipment; Alameda, Calif.

Kenan Systems
Leading provider of billing and customer care communications software; Cambridge, Mass.

WaveAccess
Developer of high-speed, wireless data communications technology; Ra'anana, Israel, and Wellesley, Mass.

Pario Software
Privately held start-up developer of next-generation network security software for IP-based networks; Redwood City, Calif.

"Lucent leads in our ability to design, build and service networks for the next generation."

looking for ways to adapt their networks for the delivery of new communications services. Enterprise customers around the world are responding to new competitive challenges as commerce on the Internet continues its explosive growth. E-business has become the Internet's latest growth phenomenon, and enterprises are looking for networking solutions to give them new operating efficiencies while helping them improve their relationships with customers. Every major customer is striving to build converged, reliable, high-speed voice and data networks.

Demand for our communications semiconductors and optoelectronic devices also continues to grow as communications becomes the new driver for the industry. Today, Lucent is the worldwide leader in chips and devices specifically built for communications products such as cell phones, modems and personal computers. In addition, we are a leader in the hottest semiconductor trend since the microprocessor — systems-on-a-chip solutions. This new technology, which places the electronics for an entire system like a cell phone on a single fingernail-sized slice of silicon, offers our customers benefits such as lower cost, reduced power consumption and easier integration into their products.

As a result of these industry dynamics, demand has exploded for networking products and services — optical, packet, broadband, software, semiconductors, wireless and network consulting — all areas of major strength for Lucent.

The Strongest Year in Lucent's History

For the fiscal year ended September 30, 1999, net income rose 46 percent to $3.8 billion, while earnings per share increased nearly 42 percent to $1.22 a share, excluding one-time events (see notes a and b, page 1). Revenues increased 20 percent to $38 billion.

Each of our three major products and services groups contributed to these gains. Sales of Systems for Network Operators, our largest group, rose 24 percent to $25 billion, driven by sales of optical networking systems, wireless systems, data networking systems for service providers, broadband networks, communications software and services.

Our Business Communications Systems group posted a 5 percent increase in revenues to $8.6 billion, led by sales of DEFINITY® Enterprise Communications Servers — including those with call center applications — and messaging systems and NetCare® services.

Our Microelectronics business posted revenue growth of 18 percent to $3.6 billion, driven by increased sales of optoelectronic components and power systems, customized chips for high-speed communications, data networking and wireless systems.

During the year, Lucent again grew faster than the market. We announced 125 contracts worth more than $11.4 billion, nearly half with customers outside the United States. We also won contracts with 96 major new customers around the world.

"A key to Lucent's success has been our willingness and our ability to constantly reinvent our company to succeed in an industry that is constantly reinventing itself."

Our business outside the United States is growing stronger every year. Revenues from outside the United States increased 47 percent in the fiscal year, accounting for 32 percent of total revenues — up from about 23 percent when Lucent was created four years ago. One-third of our current business, and two-thirds of our total opportunity, lie outside the United States. To address this opportunity we are focusing on countries that will yield the most profitable returns, including key customers in the Asia/Pacific region, Latin America and Europe. In Latin America we experienced phenomenal growth. We signed more than 20 major contracts, valued at more than $2 billion, and grew 100 percent over 1998. In Europe, the Middle East and Asia, where we signed contracts with over 100 new service providers, we're growing twice as fast as the market. Throughout these regions we have forged strategic relationships with service providers like Telefonica in Spain and Portugal Telecom.

Every day, we capture sales in areas that were out of our reach only a year ago, until the right technology emerged. We won more than 60 major contracts for products that didn't exist a year ago. For example, we signed contracts with Level 3 Communications in the United States, Telefonica Data of Spain and Telstra of Australia for large networks that will be based on a Bell Labs breakthrough technology called the Softswitch, which brings the reliability of voice networks to data networks.

Constantly Reinventing Lucent for Growth and Profitability

A key to Lucent's success has been our willingness and our ability to constantly reinvent our company to succeed in an industry that is constantly reinventing itself.

In the past few years, we have steadily added new technologies and capabilities — generated by Bell Labs innovations and by acquiring technology and talent — to help us deliver next-generation networks to our customers.

Also, we continued to deliver Bell Labs innovations to the market at a faster pace. Last year Lucent introduced a record 128 products that originated at Bell Labs. Bell Labs researchers also earned 1,020 patents during the year — more than ever before.

In addition, we acquired industry-leading companies to help us address the industry's highest-growth areas (see list at left). The integration of Ascend Communications, with our other data networking resources, gives us leadership in data networking systems for service providers.

With the acquisition of Ascend, Lucent is now a leader in both the voice and data worlds for service providers. Today, 70 percent of the world's Internet traffic travels over Ascend equipment. The Lucent 5ESS switch serves nearly 300 service providers in more than 50 countries.

The addition of Kenan Systems gives us global leadership in a market that's growing even faster than communications software overall — at 30 percent annually. If Lucent were strictly a software company, we would be the fifth largest in the world.

With International Network Services, we now have a professional services force of more than 5,500 experienced consultants, technicians and engineers, the largest in the world of communications networking. It will address a market that's growing at 17 percent annually.

Nexabit Networks brings us leading next-generation Internet protocol switches that can speed data through networks at more than 1 trillion bits a second — four times faster than today's counterparts. Nexabit's blazing speeds will bring high-quality Internet services such as live television or movies-on-demand downloaded by computer. Nexabit switches will also link directly to our optical networking systems to add even more speed to our high-capacity networks.

With Excel, we are a leader in programmable switches, a market that's growing at 20 percent a year. Programmable switches enable telephone companies to keep pace with technological changes without replacing their existing systems. A software upgrade lets carriers add new applications — like prepaid calling cards, "follow me, find me" services and unified messaging features.

We're **No.1**

Lucent is No. 1 worldwide in the following high-growth segments:

- **Communications networking** overall
- **Switching** for global service providers
- **Optical networking** using Dense Wavelength Division Multiplexing
- **Voice over Internet protocol**
- **Wireless networks** using Code Division Multiple Access
- **Networking Services and Support**
- **Remote access**
- **Superfast (ATM) switching** for core networks
- **Frame relay** a high-speed switching technology
- **Call centers**
- **Messaging**
- **Semiconductors** for communications
- **Optoelectronic components** for communications
- **Application fiber**
- **Power equipment**

"We continue to win the competitive war for talent in four key areas — systems, software, silicon and services."

Realigning the Business to Deliver What Customers Want

To help us integrate these acquisitions and focus clearly on customers worldwide, we realigned our business and our leadership to offer our customers what they want: converged networks. The realignment will help us respond faster to customer needs with our full capabilities.

It's intended to sharpen our focus on high-growth areas — such as data networking, optical networking, wireless, semiconductors, e-business and professional services — while also speeding our growth in international markets and increasing productivity across the company.

Each of our core businesses is capable of responding rapidly to customer needs, and of providing converged voice and data network solutions. And they are operating under one brand, with one standard of quality, supported by Bell Labs.

Service Provider Networks consists of our Optical Networking, Switching and Access Solutions, Wireless Networks and Communications Software products and services groups; our business focused on serving cable TV operators; those parts of InterNetworking Systems focused on service providers; and the global service provider sales and service organizations.

Enterprise Networks consists of our current Business Communications Systems and Government Solutions, plus those parts of InterNetworking Systems focused on enterprise customers and the channel that supports SYSTIMAX® cabling systems. It is responsible for both voice and data solutions for enterprises, including the U.S. government.

NetCare Professional Services consists of our current professional services business, which recently merged with the newly acquired International Network Services company to create the most comprehensive services portfolio in communications networking.

Microelectronics and Communications Technologies consists of our current Microelectronics business, Network Products, New Ventures and the Intellectual Property Division.

Our realignment is all about growing our business and managing our operations in ways that produce ever greater efficiency and productivity.

A Clear Vision

Our strategy is to build long-term alliances with major industry players. When Telefonica Data needed to build a network based on Internet protocol technology, they were looking for more than just routers and hubs. They turned to Lucent, because we understand their future network vision and we can support that vision with the latest technologies and advanced services.

We offer our customers the end-to-end network solutions they need. We have leadership in every key network building block — in voice, data, optical and wireless networking. We have the clearest vision of communications net-

"We have leadership in every key network building block — in voice, data, optical and wireless networking."

works for the next generation: We know how voice and data networks work together today and how they will converge into the network of networks tomorrow.

We offer the best migration path to next-generation networks, as well as the best solutions for so-called "greenfield," or start-up, companies, whether they're building wireline or wireless networks. Add to these strengths our unparalleled network integration capabilities, and it becomes clear why we lead the industry in communications networking.

Positioned for Growth

We are proud of our achievements for 1999 and the people who stand behind our past success and our future prospects in the marketplace.

I believe our people are the best in the industry. And we continue to be successful in the competitive war for talent in four key areas — systems, software, silicon and services. Our culture continues to change as well, becoming quicker, more open and more entrepreneurial.

We are proud of the reputation we have forged with customers, investors and the public. In a *Wall Street Journal* survey of 6,000 subscribers, Lucent ranked fourth among 773 companies for "quality of management," fifth for "reputation of a company" and second for "investment potential." Among communications technology companies, Lucent ranked first in all three categories in the survey.

We are proud, too, of the diversity of our work force, which also has received public attention. In 1999, we captured eighth place in *Fortune* magazine's ranking of the 50 best companies for minorities. *Fortune* found that "Lucent has more people of color among its 25 highest-paid executives (nine) than any other company in our rankings."

We believe we're well positioned to continue our extraordinary growth and to increase value for our shareholders. Demand for our systems, technologies and services remains strong. The market remains robust. And no one comes close to Lucent in our ability to build, design and service networks for the next generation.



Richard A. McGinn
Chairman and Chief Executive Officer

November 15, 1999