

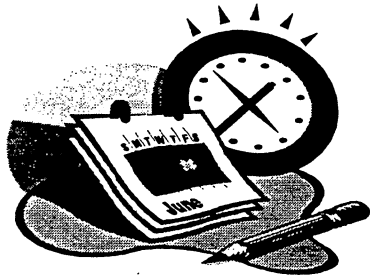
NETWORK!

FOR PEOPLE IN THE NETWORK SYSTEMS BUSINESS OF LUCENT TECHNOLOGIES

Don't Miss The Lucent Technologies All-Employee Broadcast, April 18

Please join us for a live employee broadcast hosted by Rich McGinn, Lucent Technologies president and chief operating officer, on April 18, from 10 a.m. to 11:30 a.m. Eastern time. McGinn and Lucent's operating unit presidents will discuss second-quarter results and recognize employees around the world who are working to exceed the expectations of their customers. The broadcast will also have a question and answer session. **NETWORK!** will publish more details as the date approaches. □

Mark Your Calendars...



Lucent Expects Earnings Per Share For Second Fiscal Quarter To More Than Double Analysts' Estimates

Lucent Technologies told financial analysts today that it expects to report net income in the range of \$55 million to \$65 million, or \$.09 to \$.10 per share, for the second fiscal quarter ending March 31, 1997—more than double analysts' published consensus estimates. Lucent will report its second fiscal quarter financial results on April 17.

Donald K. Peterson, executive vice president and chief financial officer, also told analysts that Lucent expects to report quarterly

revenues of approximately \$5.1 billion. For the year-ago quarter, Lucent reported a loss of \$103 million or 16 cents per share on a *pro forma* basis (as though all the Lucent stock outstanding at the completion of the company's initial public offering had been issued during the first quarter of 1996) on revenues of \$4.577 billion.

Peterson attributed the results to "strong sales of high margin products such as software and wireless

Continued on page 6

Network Systems Internet Solution Allows Phone, Fax Calls Over The Internet

Lucent Technologies Network Systems earlier this week introduced a new telephony-over-the-Internet solution for communication service providers that lets consumers and businesses make phone and fax calls over the Internet.

And Network Systems already has three interested customers. MCI Communications Corp. and France Telecom announced they will trial the new solution, while GTE Telephone Operations said it will conduct a laboratory evaluation of the new platform beginning this May.

Called the Lucent Internet Telephony Server SP (Service Provider), Network Systems' solution is a hardware and software platform designed to route phone calls, faxes and voice mail over the Internet and other data networks. With this technology, service providers—including local and inter-

What's Inside -

April 3, 1997 Vol. 6 / Issue 15

- 3.... Lucent and Southwestern Bell Announce MWBE Alliance
- 3.... NS Helps Develop Wireless Technology in Japan
- 4.... In the News
- 5.... Industry Watch
- 6.... Of Interest

Continued on next page

NS Solution for the Internet

Continued from previous page

exchange carriers, Internet service providers, cable companies or competitive access providers—can offer a cost-effective alternative to traditional long-distance calling. They can also generate new revenue by adding voice service to their data offerings.

“We are enabling service providers to enter an entirely new market—one with outstanding profit margins—in what potentially could be a billion dollar arena,” said Gerald Butters, Network Systems president, North America region. “With today’s dramatic and rapid

improvements in technology, we are now able to make high quality Internet telephony a reality, a historic milestone in the evolution of the public network.”

While other companies have introduced software or hardware that delivers phone calls over the Internet, Lucent is the first communications company to offer an end-to-end solution that includes both. The Internet Telephony Server will be generally available in the third quarter of the calendar year.

Analysts’ Reactions

“Because it’s Lucent, not only can they announce a product, they can support it in 90 countries around the world,” said industry expert Jeff Pulver to the *Wall Street Journal*.

“Lucent’s Internet Telephony Server SP raises the stakes substantially in the Internet telephony/fax gateway market,” said Hilary Mine, senior vice president of Probe Research. “With its non-proprietary architecture, Lucent has addressed the critical barriers to deployment, saving service providers from being locked into one particular vendor, and moving Internet telephony into the mainstream.”

MCI Test

In its trial, MCI will use Lucent’s Internet Telephony Server SP for telephone calls over its intranet between its Colorado Springs, Colo. and Reston, Va. offices. MCI will add an international location to the trial later.

“With today’s dramatic and rapid improvements in technology, we are now able to make high quality Internet telephony a reality, a historic milestone in the evolution of the public network.”

— *Gerald Butters, Network Systems president - North America region*

“Internet telephony can play an important part in the mix of voice and data services we offer. The Lucent trial permits MCI to evaluate one of several potential ways to implement such services,” said Fred Briggs, chief engineering officer for MCI Communications.

Growing Trends

The Internet Telephony Server SP reflects the trend in the telecommunications industry toward merging phone and data networks. With Lucent’s new technology, local service providers, cable companies and Internet service providers can find new sources of revenue in the changing telecom market. Long-distance companies can respond to their customers’ need for lower cost long distance and enhanced data communications.

How It Works

A key component of Lucent’s Internet Telephony Server SP is Bell Laboratories’ new **elemedia**™ software, also announced earlier this week. The speech encoder software provides high-quality service over standard Internet connections and allows the Internet Telephony Server SP to operate with all major switch vendor products.

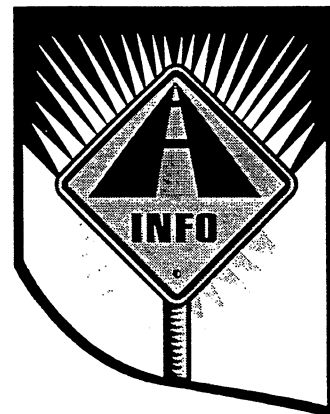
To deliver phone or fax calls over the Internet or other data network, a service provider initially needs only two components: one Internet Telephony Server SP near the central office where the call originates and another near the termination point.

A call from New Jersey to San Francisco using Lucent’s Internet Telephony Server SP works like this: A call originating from a standard phone is routed over the public network to the local central office in New Jersey (incurring only a local charge, if any). From there it’s

handed off to a Lucent Internet Telephony Server SP in New Jersey. The server then sends the call over the Internet (or another data network) to the server in San Francisco, which routes the call over the local public network and to a standard phone at the destination point.

The advanced compression technology allows the call to be efficiently carried over both packet networks and circuit networks. In case of Internet congestion or line quality problems, the technology automatically detects the problem and provides an alternate route over another data network.

Continued on next page



NS Solution

Continued from previous page

More to Come

Future applications of the Internet Telephony Server SP will allow phone-to-computer, computer-to-phone, and computer-to-computer calls over the Internet, as well as audio conferencing, messaging, video conferencing, call centers and media collaboration.

Advertising

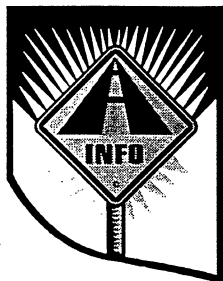
Newspaper ads announcing our Internet Telephony Server began running in major newspapers such as the *Wall Street Journal*, *New York Times*, and the *Asian Wall Street Journal* on April 1. The ads graphically depict the difference in the quality of Internet voice calls before and after our product announcement. The ads will run in trade publications beginning April 7.

Other Internet Solutions

The Internet Telephony Server SP is just one element in Network Systems' portfolio of Internet-ready products and services for service providers. Others include:

- ♦ Lucent's Internet Directory Server, which gives service providers the ability to offer personalized electronic commerce applications.
- ♦ Products that relieve Internet traffic congestion, such as the Access Interface Unit and the Access Gateway.
- ♦ The Auto-SPID software feature which simplifies the process for turning up ISDN services.

For more information about the Internet Telephony Server SP and Network Systems' other Internet solutions, visit Lucent's intranet site at <http://www.lucent.com/netsys/news/netsyspr.html> □



NS Announces

Lucent And Southwestern Bell Announce Alliance With Minority Business Enterprises

Lucent Technologies and Southwestern Bell signed an agreement valued at more than \$150 million over the next five years that will involve minority business enterprises in Texas and Missouri. This agreement is the largest involving minority business enterprises ever jointly entered into by Southwestern Bell and Lucent Technologies.

Harvard Manufacturing Texas, based in Austin, Texas; TeKontrol, Inc. (TKI) with facilities in Arlington, Texas; and World Wide Technology of St. Louis, Missouri will provide light assembly and material management of cable and components for Southwestern Bell's telecommunications network.

"The alliance is not only an example of an innovative solution in response to a specific customer need, but it also is an opportunity for Lucent and Southwestern Bell to support and help grow this very important segment of the business community—minority business enterprise," said Sam Stuessy, SBC customer team vice president.

Lucent will sell the materials to the minority business enterprises, which will perform light assembly and testing based on Southwestern Bell's specifications and then sell the products to Southwestern Bell.

Network Systems Helps Develop Next Generation Wireless Technology In Japan

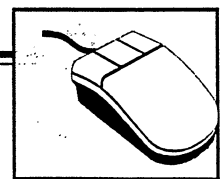
Lucent Technologies has begun 1997 with an aggressive push to establish a leadership role in the early deployment of Code Division Multiple Access (CDMA) wireless technology throughout the Asia/Pacific region and in China. On December 31, 1996, Lucent successfully completed the first CDMA telephone call in China using its newly installed trial system in the Guangdong province.

Today, Lucent announced it is among the vendors chosen to develop and build a prototype for a next generation Wideband Code Division Multiple Access (WCDMA) wireless system for NTT DoCoMo—the largest wireless service provider in Japan. Other companies working with NTT DoCoMo include Ericsson, Fujitsu, Matsushita and NEC.

The prototype system will have multimedia capabilities, including high speed data transmission. Once the system is released commercially it will provide wireless voice, data and video services and intelligent networking features. With deployment scheduled for the turn of the century, NTT DoCoMo is expected to be the first wireless service provider in the world to deploy a next generation system. □

Surf the Network
Systems Web site!

1. Go into the Lucent home page at <http://www.lucent.com>
2. Click on "Systems for Network Operators"



In the News

Internet Telephony

"We are starting small, but when interest in Internet telephone takes off as we expect, we'll be ready," [said] Brian Allain, director of Internet initiatives at Lucent. Lucent's technology trials with MCI and other large phone companies add credibility to the claim that using the Internet to make long-distance phone calls is on the verge of becoming a mainstream technology. (*Arizona Republic*, "Digital Jam" on *CNN Financial Network*, *Asian Wall Street Journal*, *Daily Record [NJ]*, *Computer Daily News [Australia]*, April 2)

Stock Investors' Affection for Lucent Technologies

Lucent's stock performance outstrips the performance so far this year of almost every high technology company larger than Qualcomm, a wireless-communications company whose shares have jumped more than 40 percent.

Some important gaps remain in Lucent's product line. Even so, its offerings in telecommunications equipment have the company well positioned to profit from the main battles of the communications revolution.

What many analysts and investors now more fully understand is that only a few companies make the complex gear used by big providers of telecommunications services. And Lucent is among the strongest of that fraternity. The company makes perhaps the best-regarded switch for handling tens of thousands of simultaneous telephone calls and is staking out a leading position in North America in wireless-communications systems.

Lucent's most obvious weakness is that it does not yet offer much equipment for the thriving data-communications market. Analysts

appear even more concerned that the company reduce its bloated cost structure. A cornerstone of the company's strategy is a plan to cut expenses in the category known as S.G.& A. or selling, general and administrative costs. Progress has already been made. Lucent's S.G.& A. fell to 24 percent of revenue in 1996. Still, that cost measure was considerably higher than the 17.1 percent figure for Northern Telecom, Lucent's fiercest competitor.

In cutting S.G.& A. costs over the next few years, the company hopes to reduce the money it spends on its own information systems to about 4 percent of revenue from 8 percent. As part of that effort, Lucent contracted out much of its information-systems operation last year to I.B.M. More problematic, perhaps, are Lucent's sprawling real estate holdings. If Lucent could reduce those holdings to under 45 million square feet, it says it could squeeze one or two more percentage points from its S.G.& A. figure, saving a few hundred million dollars. (*The New York Times*, April 3)

Data Networking Unit

Lucent Technologies [Network Systems] is set to go public with its new unit that will market data communications and Internet solutions to carriers worldwide. Lucent's data unit will target unregulated units for data networking and Internet services that telcos are setting up now, along with competitive local exchange companies and wireless carriers that are moving into data. The new unit will better position Lucent against data switch vendors such as Cisco Systems. (*Telephony*, March 24)

NEWS



Industry Forms Training Consortium

Some of the biggest names in the industry joined together to create a new generation of radio-frequency [RF] experts. The wireless industry continues to feel the shortage of qualified RF engineers and technicians. AT&T Wireless Services Inc., Lucent Technologies Inc. and Motorola Inc.'s Cellular Infrastructure Group formed the Global Wireless Education Consortium to combat this problem. GWEC intends to develop two- and four-year RF programs at schools interested in becoming a consortium member. As the graduates emerge from these programs, consortium members will seek to employ the RF engineers and technicians to fill the greater need during an upswing in buildouts. (*Wireless Week*, March 17)

Thinking Small

It hasn't been economically feasible for network operators to build a state-of-the-art infrastructure in smaller or remote markets. That is all about to change, thanks to the advent of affordable compact digital switches. The Lucent Technologies 5ESS®-2000 very compact digital exchange (VCDX) [switching system] for example, was developed to economically serve exchange sites serving less than 15,000 trunks. The VCDX offers the same quality and reliability as Lucent's largest 5ESS-2000 switch—which is proven to have the least amount of "downtime" of any switch in its class in the industry. (*Asian Communications*, February, 1997) □

Industry Watch

SBC Acquisition

California regulators approved Pacific Telesis Group's plan to be acquired by SBC Communications, Inc., paving the way for the two Baby Bells to close their \$17 billion deal. (*Widespread print coverage, April 1*)

More Acquisitions

Cisco Systems Inc. disclosed yesterday that it had acquired a Silicon Valley start-up company, Telesend Inc., that makes technology that allows phone companies to offer high-speed Internet access connections. (*New York Times, March 27*)

Ascend Communications Inc. agreed to acquire Cascade Communications Corp. for stock valued at about \$3.7 billion, the latest move in a consolidation frenzy gripping the computer networking gear business. Both companies make various pieces of the plumbing that links computers together in networks. (*Wall Street Journal, Boston Globe, Los Angeles Times, March 31*)

Telephony Over The Internet

The Internet is turning into an increasingly refined, low-cost alternative to the traditional phone network. "Generally speaking, there is little doubt there is a move toward voice over data," Yankee Group analyst Brian Van Dussen says. "You're not going to see a wholesale migration of phone traffic into the Internet, but it is not to be disregarded. It is a threat." One big problem remains: The Internet is congested with data traffic, and there simply isn't enough room for lots of voice calls. (*USA Today, March 31*)

More 'Net

The white line dividing computers and telephone, voice and data, is blurring at last. Why now? Because

of a confluence of technology and demand—driven to a huge degree by the Internet phenomenon. Building on the union of data networks and computers, the Internet has become the new global communications infrastructure for businesses. The Internet is giving rise to new products that could undermine the traditional phone services. (*Business Week, April 7*)

Cellular In Brazil

In what is shaping up as the biggest telecommunications deal in Latin American history, the vast, poorly served Brazilian cellular market is about to be opened to private and foreign investors. On April 7, Brazil's government plans to auction off 10 regional cellular concessions for minimum prices totaling \$3.6 billion, pitting international telephone giants against one another in a contest of Amazonian proportions. Brazil already has about two million cellular-phone users, about as many as all the rest of Latin America put together, and that number could rise to 15 million by the year 2002, according to projections by Booz-Allen & Hamilton Inc. "This is a very hot market and nobody can afford to ignore it any longer," says Flavio Grynszpan, country manager for Motorola Inc. (*Wall Street Journal, March 31*)

Motorola Wireless Win In Japan

Motorola won digital cellular telephone equipment and servicing contracts valued at up to \$3 billion from a pair of Japanese cellular operators. Motorola also said it had made technical improvements to its digital system that will dramatically increase its ability to handle large volumes of calls with improved voice quality. (*Wall Street Journal, Financial Times, New York Times, Pittsburgh Post-Gazette, Chicago Tribune, March 27*)

Wireless Competition In Singapore

New competitors took the first bite out of Singapore's telecommunications monopoly yesterday, starting up cellular and paging services on the island as the government warned against "predatory" competition. (*Financial Times, April 2; Asia Times, April 1*)

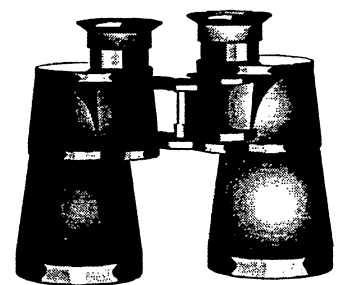
CDMA Wireless Quality

A controversial new wireless telephone technology [CDMA] scored better in quality tests than other wireless phone standards, says a study by a prominent analyst with New York's Prudential Securities Inc. CDMA, a method of splitting communications signals, has a voice quality as close to wireline service as possible, Analyst Michael Elling says. While Elling's survey is not considered scientific, it is one of the first attempts by an independent analyst to judge the quality of the various wireless systems. (*Financial Post [Toronto], March 29*)

SBC In Telekom South Africa

A consortium led by SBC Communications Inc. plans to spend \$1.26 billion for a 30% stake in Telekom South Africa, representing one of the biggest pushes yet into the burgeoning African market. (*Wall Street Journal, March 26; Dallas Morning News, New York Times, March 27*)

Continued on next page



Of Interest

Shares For Growth Update

The 1997 Shares for Growth payments were mailed to eligible U.S. occupational employees last week. After tax and other applicable deductions, the remaining amount was converted to whole shares of Lucent stock, determined using a per share price of \$44.9746. Fractional shares were issued in the form of a check. The difference between the per share price and the average of Lucent's share value on the payment effective date of March 10, 1997, \$54, multiplied by the number of shares received, is taxable. This taxable amount was added to year-to-date wage totals on paychecks payable March 27, and applicable Social Security and Medicare taxes were deducted. If you are eligible for Shares for Growth but have not received your payment by April 7, call The Bank of New York at 1-888-LUCENT6 (582-3686).

Network For The Next Millennium

The Internet and data networking technology are giving birth to a new era—networked economy. You can find out what this new networking age will bring, what it will mean for you, and the leading role Lucent will play by reading President Rich McGinn's keynote address, recently delivered at the Networked Economy Conference. The speech is available on Lucent's home page at <http://www.lucent.com> under the section "What's New." □

Letters to the editor



NETWORK! will publish signed letters as space permits—reserving the right to edit for clarity. Please include your name, work location, and a contact number where we can reach you. Opinions expressed in the Letters section do not necessarily reflect the views of Network Systems management. See our contact information at right.

Industry Watch

Continued from previous page

Cisco/Netcom Alliance

Netcom On-Line Communications Services said it formed a marketing alliance with Cisco Systems as part of a strategy to offer higher-priced Internet services to business customers. The Internet-access company will offer Cisco's networking products to its customers. Cisco will help market Netcom's services. (*San Jose Mercury News, March 28*)

ATM Growing Fast

A recent Yankee Group study on wide area networking that shows a major movement toward Asynchronous Transfer Mode [ATM] switching is widely cited by equipment vendors as an indication that this long-awaited market has finally emerged. The study's author, Yankee Vice President Jennifer Pigg, says her review of carrier technology deployment plans shows 1997 will be a major year for ATM deployment, with faster growth to come in years ahead. (*Interactive Week, March 3*) □

Earnings

Continued from page 1

communications systems, the impact of programs to reduce selling, general and administrative expenses, and improved performance of our international operations." He also told analysts that the quarter's results will include increased revenue from Lucent's personal communications services (PCS) contracts.

"We expected a good, strong quarter, and we are pleased to deliver a bottom line that more than doubles analysts' consensus estimates," said Peterson. "This is a good progress report as we complete our first full year as a public company." □

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NETWORK!

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