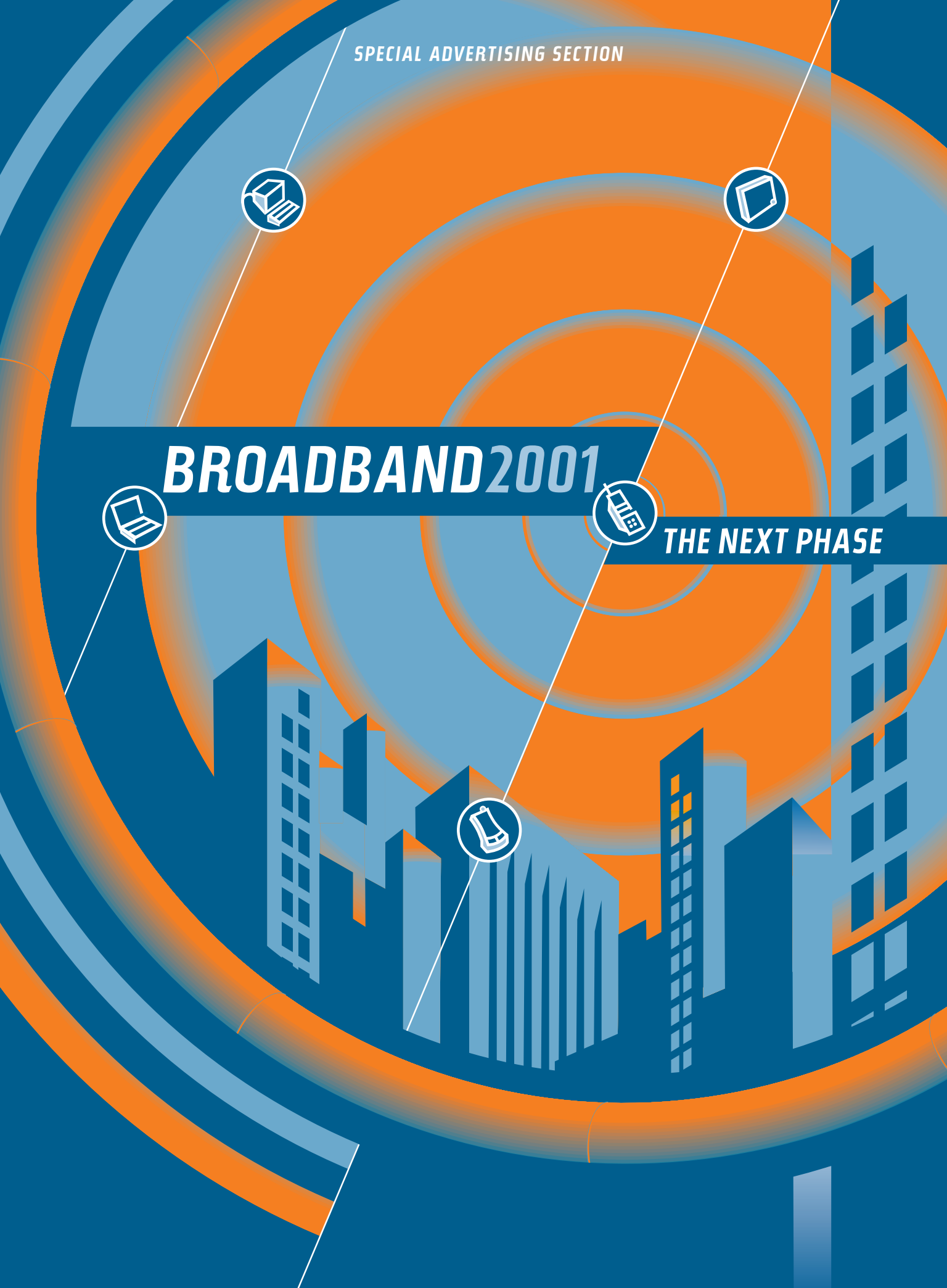


SPECIAL ADVERTISING SECTION



BROADBAND2001

THE NEXT PHASE



BROADBAND2001

THE NEXT PHASE

**WHEN THE ECONOMY RECOVERS,
THE MOST PREPARED COMPANIES
WILL BE IN THE BEST POSITION
TO GAIN COMPETITIVE
ADVANTAGE FROM
BROADBAND.**



The sense of conflict in business and technology leaders is palpable. In the midst of the Internet revolution, executives clearly recognize the need for bigger pipes—more effective technology highways to transport voice, data, and image traffic to support the insatiable demand for bandwidth-intensive applications. Corporate executives understand that broadband technologies are unquestionably the future for key business applications. But the economy is slowing rapidly, and no one knows where the bottom really is. As if on cue, corporate leaders pulled back on spending, deciding that big-ticket technology investments such as broadband would have to wait until the economic outlook brightened.

"There's a lot of fear out there, because no one knows exactly how bad this downturn will be," says Bob Hafner, vice president at industry analyst Gartner. "Everyone is making do with what they have for now. It's not a matter of not believing in the value of the technology. It's just a matter of postponing it until the economics are right."

So how can business leaders resolve this conflicting need to support user demand with high-performance technology while still respecting uncertain economic conditions and reduced corporate budgets?

(continued on p. S9)

**"COMPANIES
KNOW THEY
ARE GOING TO
BUY BROADBAND;
IT'S JUST A MATTER
OF WHEN."**

—BOB HAFNER, VICE PRESIDENT, GARTNER

company profile

ADC: The Power of New Efficiency

For many business leaders, the prospect of introducing broadband technologies into the networking mix raises new questions. Which technology is appropriate to corporate needs: DSL, cable modem, or wireless? Which applications are well-suited to broadband? Which users need broadband access? How should companies begin using broadband? ADC Telecommunications has answers.

The economy is slowing, and corporate technology budgets are shrinking. In such an environment, the need for productivity-enhancing solutions becomes strikingly clear. With fewer opportunities for additional revenue, enterprises can best create bottom-line improvements by concentrating on developing new efficiencies. But where can new efficiencies be most effectively created?

Consider the impact of high-performance bandwidth technology: broadband. Users want faster access, bigger pipelines, and better performance for today's Internet-based communications and applications. As enterprises embrace bandwidth-intensive applications such as distance learning, group conferencing, video-on-demand, and other collaborative efforts, the demand for ever-increasing communication speeds and processing power becomes insatiable.

A Liberating Technology

Historically, however, only the largest enterprises have been able to afford the technology that delivers broadband's high data speeds and volumes across "the last mile" from the carrier backbone to corporate facilities. For everyone else—small and medium-sized businesses, telecommuters, small branch offices, and traveling employees—the only option has been dial-up access to the Internet or the corporate backbone.

Dial-up is slow, time-consuming, fault-prone, and generally a disappointing experience. As Rick Roscitt, chairman and CEO of ADC Telecommunications says, "dial-up is a complete productivity killer."

But dial-up is no longer the only bandwidth option for enterprises. New broadband technologies and services are making it simple and cost-effective for executives to bring high-speed, high-volume access to all employees, eliminating the traditional barriers and boosting productivity. "Broadband is a liberating technology that allows corporate users to stay connected and work at lightning speed, even when they're accessing the system remotely, from home, or even from a hotel room," says Roscitt. "The obvious gain is in employee productivity and, therefore, improvement to the bottom-line."

Answers from ADC

For many business leaders, however, the prospect of introducing broadband technologies into the networking mix raises new questions. Which technology is appropriate to corporate needs: DSL, cable modem, or wireless? Which applications are well-suited to broadband? Which users need broadband access? How should companies begin using broadband? Considering the slowing economy, is this the right time to investigate new broadband technology?

ADC, one of the primary sources of telecommunications products

and services to the world's communications companies, understands these concerns. Since its founding in 1935, ADC has been a leading provider of fiber optics, network equipment, software, and integration services to a who's who of telecommunications vendors, including AT&T, all of the regional Bell operating companies, Qwest, Sprint, WorldCom, and British Telecom, as well as major cable television companies. The \$3.4 billion company, ranked 486 in the latest FORTUNE 500® listing, and an S&P 500 company, is headquartered in Minnetonka, Minnesota with sales into 130 countries and approximately 21,000 employees worldwide.

Spark Plug for the Digital Revolution

ADC is comprised of three lines of business that address the complete bandwidth needs of companies: optics technology, including lasers, components, and subsystems; "last mile" technology, including DSL and cable systems; and professional integration services and operating software for carriers worldwide. ADC's operating software helps carriers improve their time-to-market for broadband technology by providing automated ordering, provisioning, order processing, and billing of services; this software helps carriers turn on broadband services on the spot, enabling enhanced customer service and improved time-to-profit for carriers.

"We see ourselves as the company that will enable service



providers to deliver a whole new generation of broadband capabilities to end users. Having high-speed, high-performance access is one of the spark plugs required to get the digital revolution in high gear," Roscitt says.

Jeff Kagan, an independent telecommunications industry analyst based in Atlanta, calls ADC "a solid company with a long and rich history. ADC has successfully transformed itself over the years from a telephony company to a data and

inclination to hold tight to the spending reins. Says Roscitt: "There's no denying that—in any economic downturn—everyone is a little more conservative. But this trend is temporary, because today's business environment demands the speed and connectivity of the network-centric business model. As time passes, employees will demand even faster service and bigger pipelines, making broadband a critical part of the corporate infrastructure."

"Broadband is a liberating technology that enables corporate users to stay connected at work, at home, and on the road at lightning speed, with obvious gains in employee productivity and the corporate bottom-line."

**RICK ROSCITT, CHAIRMAN & CEO
ADC TELECOMMUNICATIONS, INC.**

broadband provider," he says. "They may not be the company whose name everyone knows, but they are very healthy and play an important role in transforming the communications industry."

A New Leader

Key to this transformation has been the appointment earlier this year of Roscitt, a 28-year veteran of AT&T, as chairman and CEO. Hired to help ADC grow from a solid but conservatively run corporation into an industry-leading provider of cutting-edge technology solutions, Roscitt understands the challenges facing customers. In his old job, he was a customer of ADC's. "Roscitt has a long history of focusing on the needs of large business customers, which will serve ADC well," says Kagan.

During its 65 years providing technology solutions to industry, ADC has seen many business cycles and understands executives' current

Serving Enterprise Needs

Roscitt advises corporate leaders to think of this economic slowdown as an opportunity to experiment cautiously with broadband technologies to determine which can deliver the most significant productivity benefits. "It's not as if a company needs to put 100,000 users on the technology at once. But executives can pilot multiple technologies inexpensively to determine which can help their organizations most," Roscitt says.

DSL, cable, and wireless each have different characteristics, performance benefits, and cost structures. And in most geographic areas, only one or two of the three are available, so leaders must experiment with what they have. "Don't try to predict a winner," says Roscitt. "Try each one for its different cost, availability, and performance characteristics until you can zero in on which works best for your applications."

As the business demand for broadband speed and power grows, ADC will continue to expand its reach to better serve enterprise needs. Rapid, ongoing growth in ADC's European and Latin American customer base is being matched by an aggressive acquisition strategy. Through the combined approaches, Roscitt plans to grow ADC into a \$10 billion company in the next several years. "It's clear from my background that I like to grow businesses," he says. "Eventually, the economy will return to strong growth. When it does, I really like our prospects and see us accelerating into a worldwide leadership position."

One-Stop Suite of Services

Building ADC's position through business alliances with partners and other third parties is another growth strategy for the company. "I strongly believe that partnering through alliances will help us grow and better serve customers around the world," Roscitt says.

Industry analyst Kagan agrees that acquisition and alliances will help ADC serve broadband customers better by placing a wider range of services under one corporate umbrella. "Carriers are looking for a one-stop solution, a vendor who can provide a suite of services without coordinating with multiple vendors. ADC is really well-positioned to deliver and meet that need," he says.

With its combined technology and service strengths, ADC is prepared to help telecommunications providers bring the speed and power of broadband—and the associated efficiency improvements—to businesses worldwide. "We have the right cross-section of products and services to help carriers and service providers anywhere in the world. If we do it well, if we sell to them and service them well, our growth and strength are inevitable," says Roscitt.



company profile

AGILENT: The Partner of Choice for Optical Manufacturers

How can broadband technology vendors best handle today's challenges? By working with the innovative partner to the world's leading communications companies: Agilent Technologies.

Manufacturers of broadband technology are under pressure from all sides. A slowing economy is intensifying the focus on profitability, demanding that manufacturers squeeze maximal performance from their components and devices. Technology buyers have moved the responsibility for quality testing earlier in the value chain, requiring suppliers to integrate quality testing into the manufacturing process using automated controls and real-time links between production and testing systems.

Even the ever-increasing requirement for high-speed, high-volume data transmission poses new challenges to manufacturers. Exploding bandwidth demand drives the development of fiber optic component technologies. Manufacturers must not only keep pace with increasing line rates, but also develop products for all-optical networks and new wavelength bands, stay current on evolving standards, and optimize the increasing intelligence of network devices.

How can broadband technology vendors best handle these challenges? By working with the innovative partner to the world's leading communications companies: Agilent Technologies.

Agilent, a global technology leader in communications, electronics, life sciences, and healthcare, offers a broad range of test solutions and services to the optical manufacturing community. Serving both manufacturers of optical components and devices, Agilent provides a wealth of solutions that optimize production line efficiencies and improve bottom-line results.

"Getting ahead in the optical industry requires standardization and

faster time-to-profit," says Werner Huettemann, vice president and general manager of Agilent's Communications Network Solutions division. "Agilent offers innovative test solutions that standardize, improve, and speed manufacturing and test processes on the shop floor, integrating easily with the existing production environment."

At the recent Optical Fiber Conference 2001, Agilent demonstrated how manufacturers can use optical component test solutions to optimize their existing production line and improve business results. Using a virtual manufacturing floor, Agilent displayed solutions for passive and active optical components, including thin-film filter inspection, connector quality checks, dense wavelength division multiplexing (DWDM) filter adjustments, fiber Bragg grating process control, automated passive component tests, multiplexer/demultiplexer final tests, and optical amplifier and narrowband filter tests.

With these solutions, manufacturers can accelerate the development, manufacture, deployment, and management of intelligent optical network components and devices. Says Huettemann: "Our solutions provide test analysis data that can improve yield, reduce cycle times, and reduce the number of test passes and test set-up times, which increases time-to-profit."

Kymata Ltd., a manufacturer of next-generation integrated optical components for the networking industry, used Agilent solutions to automate optical testing within its integrated optical and packaging facilities. "Agilent's solutions have been one of the key factors in

enabling us to improve our throughput and reduce our time-to-market," says Clive Wilson, vice president of operations, Kymata Ltd.

In addition to the full line of manufacturing and testing solutions, Agilent also offers manufacturers new automated testing software for conformance testing of the emerging optical User to Network Interface (UNI) signaling standard. Agilent's Optical Routing Test Solution software helps manufacturers determine whether their products or components meet the standard—a factor critical to enabling on-demand provisioning of bandwidth across optical networks—and whether they interoperate with UNI-conformant optical network devices from other manufacturers. The suite is the industry's first to focus on testing the optical control plane, the software protocols and hardware that guide optical functions and communications between multiplexers and routers.

In providing this suite, Agilent confirms its commitment to optical component and device manufacturers striving to succeed in the dynamic broadband marketplace.

"The dynamics of the optical marketplace require component manufacturers to bring new designs to market faster, quickly ramp up manufacturing volume and drive down the cost of new components to the lowest possible level," says Huettemann. "Agilent Technologies provides the broadest range of optical component test solutions and services in the industry to enable factory automation and improve the bottom line business results for optical component manufacturers."

BROADBAND2001



BROADBAND 2001: THE NEXT PHASE

(continued from p. S2)

Executives must stay current with technology developments and market changes, experiment where it makes sense, and be prepared for the winds to shift again. Because when the economy recovers, the most prepared companies will be in the best position to gain competitive advantage from broadband. Equipment manufacturers and broadband service providers are all coping with the same economic uncertainty. But not all are handling it the same way.

Broadband equipment manufacturers are generally pressing on with their R&D efforts, unwilling to let up for fear of falling behind a competitor. Carriers and other service providers, on the other hand, have stopped the full-court marketing press on new broadband services. "Most are waiting for customers to demand the services before rolling them out," says Hafner.

Yet nearly a dozen new Ethernet service providers are launching Ethernet-over-fiber metropolitan area networks (MANs) or wide area networks (WANs), according to a recent Gartner report, *The New Ethernet Service Providers*. The services are diverse, but tend to fall into three categories: pure Ethernet/IP providers, diversified network service providers (NSPs), and specialized NSPs. All of these services are in their infancy, says Gartner, and many providers may exhaust their funding or be absorbed by larger players within the next year. All of which will make this part of the broadband market fascinating—and important—for business leaders to watch.

For some businesses, a little experimentation is possible at the low end of broadband: DSL, cable, and wireless. Depending on the availability of these services—which varies by geography—companies can pilot broadband projects and calculate associated

business benefits. But when it comes to large-scale broadband deployment for technologies such as 10 MB or 100 MB Ethernet, experimentation is not a real option. Companies that need the bandwidth will make the investment. "These companies know they are going to buy broadband—it's just a matter of when," says Hafner.

Ready for the Rebound

The key is to be ready when the business cycle rebounds. Stay educated about technology changes and be prepared to consider the corporate business issues driving broadband deployment. Says Gartner's Hafner: "Consider this: Will implementing broadband offer the business some advantage, or will it provide a bigger pipe to do the same things, only faster? You don't want to wait on broadband if it slows down the deployment of new applications, services, or capabilities. That could be a serious impediment to corporate success." ■

BROADBAND2001



For more information about how to advertise in the next Broadband section, please contact Laurie Evans, Manager, Custom Projects at laurie.evans@timeinc.com or call 212-522-1253.

Produced by: Joyce Reynolds

Written by: CMK Communications Group
Contact Cheryl Krivda at krivda@cmkcom.com

Edited by: Sigrid MacRae

Designed by: SJI Associates, NYC

Reprints of this section are available in quantities of 100 or more; custom reprints can also be created. To obtain a reprint order form, please fax your request to Randi Bergman at 212-522-0999 or e-mail to randi.bergman@timeinc.com

Please see the reader service page located in the magazine for further information on the advertisers in this section.