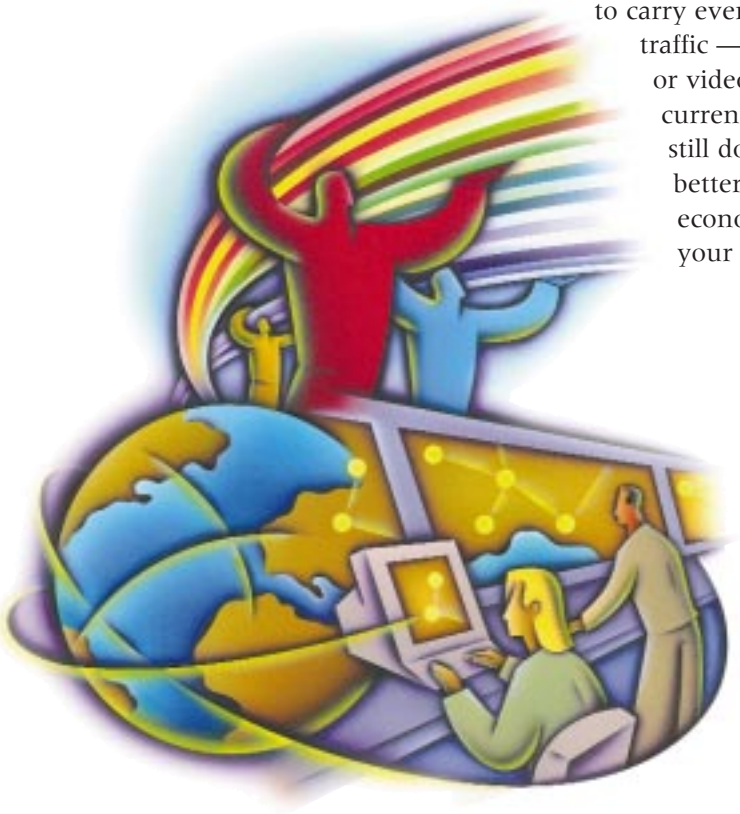
Lucent Technologies
Bell Labs Innovations

WaveStar™ OLS 400G
Unleashing the Light™

A Modular Optical Networking System that Provides Maximum Capacity and Flexibility

Here's the challenge: As a communications service provider, you must meet your customers' expectations to carry every type of traffic — voice, data, or video — on your current network, and still do it all faster, better, and more economically than your competitors.



Here's the problem: How do you meet high-usage demands with your present transmission system, knowing future services will require capacity and transmission speeds as yet undefined?

Here's the solution: Lucent Technologies WaveStar Optical Line System (OLS) 400G, a new modular optical transmission system that maximizes fiber capacity. Developed by our world-renowned Bell Labs, WaveStar OLS 400G is an 80-channel OLS for global networks. This system delivers up to 400 gigabits per second (Gbps) capacity over a single strand of fiber — equivalent to carrying more than three million simultaneous calls on one fiber.

WaveStar OLS 400G is the industry's first 80-wavelength Ultra-Dense Wave Division Multiplexing (UWDM) system to support a mix of OC-192/STM-64, OC-48/STM-16 and lower bit rate Synchronous Optical Network (SONET) or Synchronous Digital Hierarchy (SDH) formatted channels simultaneously over a single fiber. This technology allows you to operate at up to 400 gigabits per fiber!

You Can Accept the Challenge...

With the WaveStar OLS 400G, your optical global network will be able to accept the challenge of carrying every type of traffic your customers want. Furthermore, with this system you will be able to drive down the cost of transmitting a bit to close to zero, while pushing capacity toward infinity.

Here's how: The WaveStar OLS 400G system can be configured to handle up to eight fibers, each transmitting up to 400 Gbps, giving you a maximum capacity of 3.2 terabits (Tbps) (or 3.2 trillion bits) per second of voice, data, and video traffic. That's equivalent to transmitting over 90,000 volumes of an encyclopedia in one second. At this triple terabit rate, you can realize considerable cost savings over lower capacity systems. Whether you're transmitting voice, data, or video, you can count on WaveStar OLS 400G to provide an economical capacity solution.

Meet Future Bandwidth Demands — Today

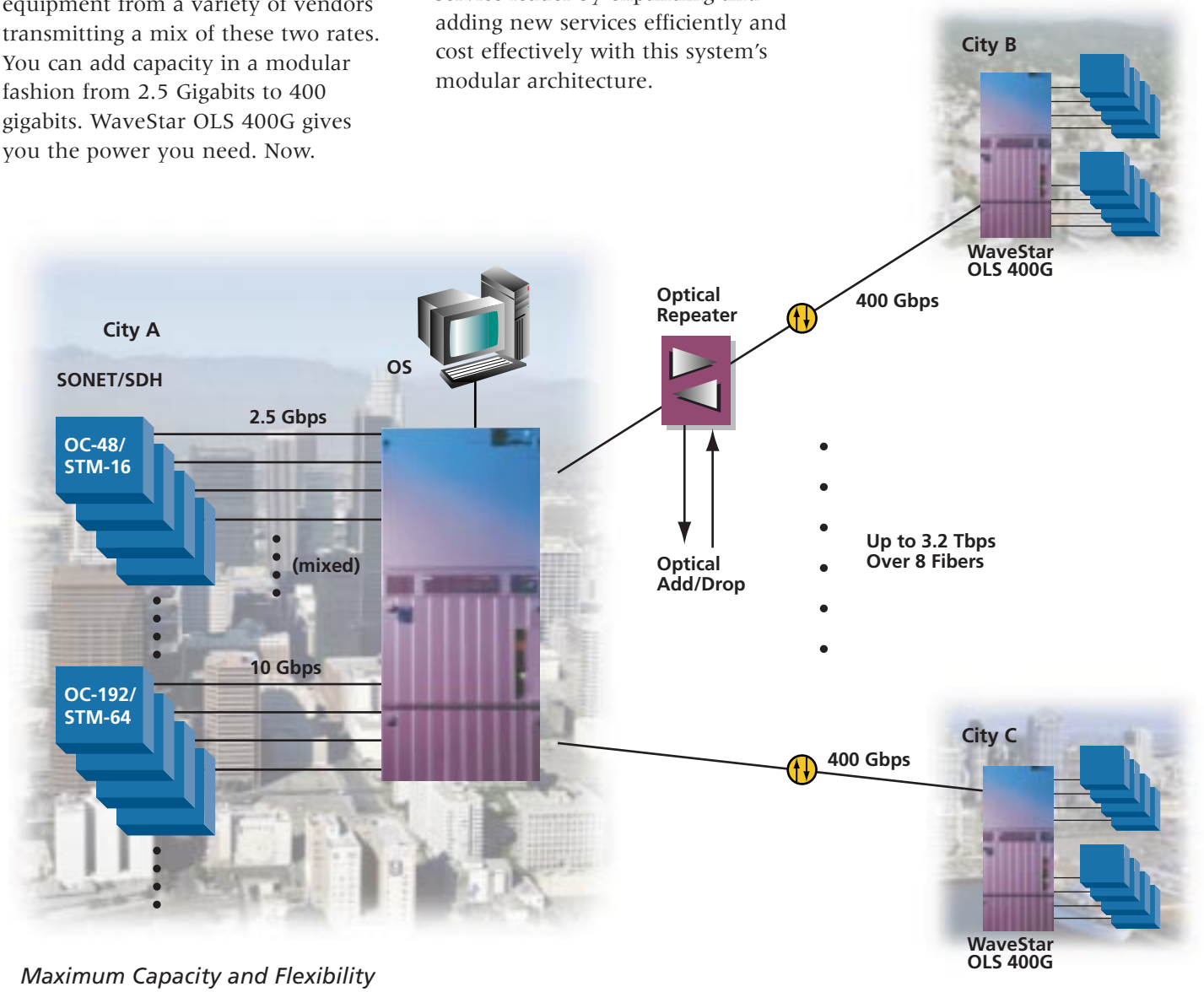
Our WaveStar OLS 400G technology allows you to leverage your existing OC-48/STM-16 infrastructure to meet future bandwidth demands. WaveStar OLS 400G is the first open-architecture system to transport inputs in the range of 45 Mbps to 2.5 Gbps as well as 10 Gbps from a variety of equipment manufacturers. OC-192/STM-64, OC-48/STM-16 and lower bit rate channels may be combined and used simultaneously for maximum flexibility. You can also combine one to 80 high-speed transmission channels over a single strand of fiber. Mindful of compliance issues, we have designed WaveStar OLS 400G to meet the size restrictions set by the European Telephone Standards Institute (ETSI).

Incremental Growth Allows You to Pay-as-You-Grow

WaveStar OLS 400G is the first single platform system that grows incrementally from one to 80 wavelengths, or channels. The system supports a simultaneous mix of 45 Mbps through 2.5 Gbps as well as 10 Gbps over one fiber. It's the first system to support equipment from a variety of vendors transmitting a mix of these two rates. You can add capacity in a modular fashion from 2.5 Gigabits to 400 gigabits. WaveStar OLS 400G gives you the power you need. Now.

WaveStar OLS 400G Allows You to Differentiate Your Network Services

- You can be a low-cost provider of conventional and broadband services via the modular "pay-as-you-grow" architecture.
- You can be a technology and service leader by expanding and adding new services efficiently and cost effectively with this system's modular architecture.
- You can maintain customer loyalty with little to no service interruptions during fault occurrence with the WaveStar OLS 400G automatic fault detection and recovery and in-service growth capability.



Maximum Capacity and Flexibility with UWDM Technology

Unleashing the Light with WaveStar OLS 400G

Using UWDM technology, WaveStar OLS 400G can help increase the transport capacity of your network — without requiring any additional fiber optic cable. Thanks to cutting-edge research and engineering at Bell Labs, Lucent Technologies is leading the way in optical networking. You can count on our WaveStar OLS 400G to help you meet the high-capacity demands of tomorrow's customers.

Summary of Benefits and Features

High Capacity — For Maximum Network Growth

- Up to 40 OC-192/STM-64 wavelengths (40 x 10 Gbps = 400 Gbps per fiber)
- Up to 80 OC-48/STM-16 or lower bit rate wavelengths (80 x 2.5 Gbps = 200 Gbps per fiber)

Network Flexibility — For Efficient and Economical Architectures

- Simultaneous mix of 45 Mbps through 2.5 Gbps as well as 10 Gbps rates
- Linear, 2-fiber ring, and 4-fiber ring topologies
- Up to 8 spans of 80 km
- Wavelength add/drop capability
- Open interfaces for multi-vendor interoperability

Modular Growth — For Low First Cost and Manageable Expansion

- Modular components allow incremental growth from 1 to 80 channels
- Automatic (optical amplifier) gain control simplifies growth and enables robust performance

For additional information about this and other Lucent Technologies products and services, please contact your Lucent Technologies Sales Representative.

Visit our web site at http://www.lucent.com

Lucent Technologies Inc.
Marketing Communications
5660FS Issue 3 BP 04/99

Lucent Technologies
Bell Labs Innovations