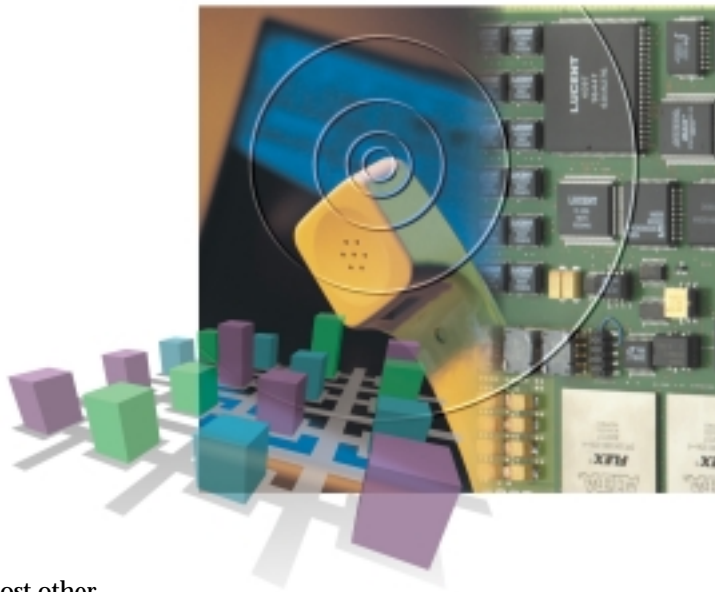# DEFINITY®
ATM Networking

Extending the Power of *DEFINITY* ECS G3 to Your Expanding Network Needs

If your business is like most other businesses today, your communication requirements have virtually exploded— with new and more powerful data applications at the desktop *plus* a growing demand for mixed media calling capabilities across a far-reaching enterprise.

As the leader in evolving communications, Lucent Technologies is dedicated to meeting these expanding needs, with support of the next generation in high-speed, high-capacity communications networking, Asynchronous Transfer Mode (ATM).

And right *now*, Lucent Technologies consolidates the voice, data, and video transport capabilities of ATM switching with the advanced call control, network services, and management capabilities of the *DEFINITY*® ECS G3, to provide a total network solution: *DEFINITY* ATM Networking.

DEFINITY ATM Networking combines the power and reliability of your *DEFINITY* ECS and the broad bandwidth availability of an ATM infrastructure to create one network for *all* your

communications needs—reducing network complexity while handling voice, data, video, and mixed media with maximum ease and cost-effectiveness. It's the best of both worlds.

Open Standards-Based Networking Support

DEFINITY ATM Networking uses open standards to integrate *DEFINITY* functionality with ATM transmission and switching, for both local and wide area networks (LANs and WANs). This allows you to utilize *DEFINITY* ECS

applications over an ATM infrastructure throughout an enterprise—within a location, across a campus, and beyond.

This convergence of voice and data networking is made possible by an ATM Services Card and ATM software that integrate into the *DEFINITY* ECS. There is no change to any key components of the system, such as the processor, port networks, or backplanes. This ease of connectivity adds value to the *DEFINITY* ECS, expanding its capabilities and protecting your investment.

The ATM Services Card provides an ATM trunk interface over either an OC-3c or STM-1 standard facility, supporting both single-mode and multimode fiber as well as private UNI 3.1 signaling. The ATM interface is controlled by one of two *DEFINITY* ATM software applications, depending on your network requirements for either Port Network Connectivity or Circuit Emulation Service trunking.

The hardware and software allow the *DEFINITY* ECS to interoperate with any standards-based ATM switch technologies, further maximizing the value of the *DEFINITY* system and your network infrastructure.

Benefits of a Shared Network

DEFINITY ATM Networking transparently consolidates all your communications traffic, bringing voice, data, and video together onto a shared ATM facility. This allows you to take advantage of scalable bandwidths ("bandwidth on demand") to transport calls—including mixed media—with greater speed and efficiency, across a LAN or WAN.

Statistical sharing of bandwidth over a WAN allows for a more cost-effective use of your facilities. Low bit-rate voice compression also improves bandwidth utilization to further help reduce costs.

In addition, ATM Networking enables *DEFINITY* system intelligence across your entire enterprise, campus, or wide area network. So, all your calls—voice, data, video, or mixed media—receive the benefits of *DEFINITY* capabilities such as real-time call control, the ability to switch calls from one endpoint to another, conferencing, and messaging.

Network management is also simplified because it, too, is consolidated across the entire networking infrastructure. Lucent Technologies offers a full array of software-based tools—system administration, fault and performance management, and more—for efficient, cost-effective centralized management of your total communications network.

Extending More Capabilities to Remote Locations

With the Port Network Connectivity (PNC) software application, *DEFINITY* ATM Networking provides an alternative to Center Stage Switching to provide port network connectivity. This robust connectivity allows network support of higher traffic and more demanding applications across the various locations within your enterprise, via a WAN and ATM infrastructure.

The PNC application is a cost-effective alternative to a direct ATM connection at each remote location. Calls between the port networks are established as

Switched Virtual Circuits (SVCs) based on UNI 3.1 standard signaling. ATM switch and "local" ATM Services Cards provide the interport network switching functions.

Enhanced utilization of the *DEFINITY* architecture is provided through the support of full port network bandwidth over the ATM infrastructure. Additionally, you can maximize all universal slots within the switch.

More Efficient Trunking

With the Circuit Emulation Service (CES) software, *DEFINITY* ATM Networking offers an alternative to non-ATM tie lines, providing trunking over ATM facilities. The ATM interface will support operation as a tandem or tie trunk, and provides Continuous Bit Rate (CBR) T1 or E1 circuit emulation for ISDN-PRI circuits.

CES trunking emulation maximizes port network capacities by consolidating trunking. For example, the CES interface can define up to ten virtual T1s for tie line connectivity, consolidating onto one circuit card network connectivity that usually requires multiple circuit packs (traditionally, 4-wire E&M or DS1).

Reliability and Survivable Processing

DEFINITY ATM Networking also extends the built-in reliability of your *DEFINITY* ECS to the ATM infrastructure. It means your total networking solution is backed by the *DEFINITY* system's advanced self-diagnostics and EXPERT Systems, for "7 x 24" electronic coverage that helps ensure maximum uptime for your communications.

Professional Services Support

Lucent Technologies also supports *DEFINITY* ATM Networking with comprehensive Lucent *NetCare*® support services designed to relieve the complexity of integrating state-of-the-art technologies for businesses. Lucent *NetCare* services offer a total solution approach to business consulting and professional services, with an array of end-to-end support choices and options based on your business's unique networking requirements.

It's all part of Lucent Technologies commitment to surrounding its technologies with global services and creating an environment where a total solution is sold, provisioned, implemented, and supported *long into the future.*

The One Source You Need

With *DEFINITY* ATM Networking, you get Lucent Technologies single-vendor support for *all* your mission-critical networking needs, right now. And as voice-centric networking systems and the data environment continue to converge, you're assured that as you adopt new applications—for ATM and beyond—Lucent Technologies will be there with all the support you need, network-wide.

To learn more about *DEFINITY* ATM Networking for your business communications, contact your Lucent Technologies representative. Or, visit our Web site. **www.lucent.com/enterprise**

ATM SERVICES INTERFACE (TN2238) SPECIFICATIONS

Services:

• ISDN (ITU-Q.2931)

• DCS

• QSIG

VTOA:

• CES-IS (ATM Forum 95-1504)

Facility Management:

• SONET (ITU-1.160)

Synchronization:

• EAI/TAI-594

Service Classes:

• AAL-1 Constant Bit Rate (CBR)

• AAL-5 Variable Bit Rate (VBR)

Connectivity Requirements:

• OC-3c/STM-1 interface
 – Multimode fiber
 – Single-mode fiber

• Private UNI 3.1 signaling

• Permanent Virtual Circuits (PVCs), including AAL-1 (CBR) with CES of ISDN-PRI

• Switched Virtual Circuits (SVCs), including AAL-1 (CBR) and AAL-5 (VBR) for PNC of ISDN-PRI

• Synchronization

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